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# Self-administered versus provider-administered medical abortion (Review)

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Self-administered versus provider-administered medical abortion.
*Cochrane Database of Systematic Reviews* 2020, Issue 3. Art. No.: CD013181.
DOI: 10.1002/14651858.CD013181.pub2.

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[Intervention Review]

# Self-administered versus provider-administered medical abortion

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**Editorial group:** Cochrane Fertility Regulation Group.
**Publication status and date:** New, published in Issue 3, 2020.

**Citation:** Gambir K, Kim C, Necastro KA, Ganatra B, Ngo TD. Self-administered versus provider-administered medical abortion. *Cochrane Database of Systematic Reviews* 2020, Issue 3. Art. No.: CD013181. DOI: 10.1002/14651858.CD013181.pub2.



## ABSTRACT

### Background

The advent of medical abortion has improved access to safe abortion procedures. Medical abortion procedures involve either administering mifepristone followed by misoprostol or a misoprostol-only regimen. The drugs are commonly administered in the presence of clinicians, which is known as provider-administered medical abortion. In self-administered medical abortion, drugs are administered by the woman herself without the supervision of a healthcare provider during at least one stage of the drug protocol. Self-administration of medical abortion has the potential to provide women with control over the abortion process. In settings where there is a shortage of healthcare providers, self-administration may reduce the burden on the health system. However, it remains unclear whether self-administration of medical abortion is effective and safe. It is important to understand whether women can safely and effectively terminate their own pregnancies when having access to accurate and adequate information, high-quality drugs, and facility-based care in case of complications.

### Objectives

To compare the effectiveness, safety, and acceptability of self-administered versus provider-administered medical abortion in any setting.

### Search methods

We searched Cochrane Central Register of Controlled Trials, MEDLINE in process and other non-indexed citations, Embase, CINAHL, POPLINE, LILACS, ClinicalTrials.gov, WHO ICTRP, and Google Scholar from inception to 10 July 2019.

### Selection criteria

We included randomized controlled trials (RCTs) and prospective cohort studies with a concurrent comparison group, using study designs that compared medical abortion by self-administered versus provider-administered methods.

### Data collection and analysis

Two reviewers independently extracted the data, and we performed a meta-analysis where appropriate using Review Manager 5. Our primary outcome was successful abortion (effectiveness), defined as complete uterine evacuation without the need for surgical intervention. Ongoing pregnancy (the presence of an intact gestational sac) was our secondary outcome measuring success or effectiveness. We assessed statistical heterogeneity with $Chi^2$ tests and $I^2$ statistics using a cut-off point of $P < 0.10$ to indicate statistical heterogeneity. Quality assessment of the data used the GRADE approach. We used standard methodological procedures expected by Cochrane.

**Main results**

We identified 18 studies (two RCTs and 16 non-randomized studies (NRSs)) comprising 11,043 women undergoing early medical abortion (≤ 9 weeks gestation) in 10 countries. Sixteen studies took place in low-to-middle income resource settings and two studies were in high-resource settings. One NRS study received analgesics from a pharmaceutical company. Five NRSs and one RCT did not report on funding; nine NRSs received all or partial funding from an anonymous donor. Five NRSs and one RCT received funding from government agencies, private foundations, or non-profit bodies. The intervention in the evidence is predominantly from women taking mifepristone in the presence of a healthcare provider, and subsequently taking misoprostol without healthcare provider supervision (e.g. at home).

There is no evidence of a difference in rates of successful abortions between self-administered and provider-administered groups: for two RCTs, risk ratio (RR) 0.99, 95% confidence interval (CI) 0.97 to 1.01; 919 participants; moderate certainty of evidence. There is very low certainty of evidence from 16 NRSs: RR 0.99, 95% CI 0.97 to 1.01; 10,124 participants.

For the outcome of ongoing pregnancy there may be little or no difference between the two groups: for one RCT: RR 1.69, 95% CI 0.41 to 7.02; 735 participants; low certainty of evidence; and very low certainty evidence for 11 NRSs: RR 1.28, 95% CI 0.65 to 2.49; 6691 participants.

We are uncertain whether there are any differences in complications requiring surgical intervention, since we found no RCTs and evidence from three NRSs was of very low certainty: for three NRSs: RR 2.14, 95% CI 0.80 to 5.71; 2452 participants.

**Authors' conclusions**

This review shows that self-administering the second stage of early medical abortion procedures is as effective as provider-administered procedures for the outcome of abortion success. There may be no difference for the outcome of ongoing pregnancy, although the evidence for this is uncertain for this outcome. There is very low-certainty evidence for the risk of complications requiring surgical intervention. Data are limited by the scarcity of high-quality research study designs and the presence of risks of bias. This review provides insufficient evidence to determine the safety of self-administration when compared with administering medication in the presence of healthcare provider supervision.

Future research should investigate the effectiveness and safety of self-administered medical abortion in the absence of healthcare provider supervision through the entirety of the medical abortion protocol (e.g. during administration of mifepristone or as part of a misoprostol-only regimen) and at later gestational ages (i.e. more than nine weeks). In the absence of any supervision from medical personnel, research is needed to understand how best to inform and support women who choose to self-administer, including when to seek clinical care.

## PLAIN LANGUAGE SUMMARY

### Self-administered versus provider-administered medical abortion (review)

**Review question**

The aim of this review was to compare whether women taking abortion drugs on their own without healthcare provider supervision can do so as successfully and safely as women who take the drugs in the presence of trained healthcare providers.

**Background**

Medical abortion used to end pregnancies has been successful and safe when women have access to appropriate information and resources. In provider-administered medical abortion, drugs are taken in the presence of trained healthcare providers. Access to medical abortion drugs has increased and has given women more control over their abortion procedures through self-administration. In self-administered medical abortion, the woman takes the drug(s) without the supervision of a healthcare provider after receiving appropriate information and resources. This is the first review of the published evidence on whether self-administration of medical abortion is a safe and successful way to end pregnancies. We compared the success and safety of self-administered medical abortion versus provider-administered medical abortion.

**Study characteristics**

We included 18 studies (two randomized controlled trials and 16 prospective cohort studies) covering 11,043 women undergoing early medical abortion (up to nine weeks gestation) in 10 countries that compared self-administered medical abortion to provider-administered medical abortion, after an initial clinic visit. Most studies (16) were conducted in low-to-middle resource settings and two studies in high-resource settings. The evidence described in this review is from studies published before 10 July 2019.

**Key results**

Women who self-administer medical abortion drugs in early pregnancy (up to nine weeks gestational age) experience similar rates of completed abortion as women who undergo provider-administered procedures in low-to-middle and high-resource settings. Evidence about safety is uncertain.

**Quality of the evidence**

The evidence for the success of self-administered medical abortion compared to provider-administered medical abortion was of moderate certainty, due to low-certainty studies. The evidence for the safety of these interventions was very low, due to low-certainty studies.

**Summary of findings for the main comparison. Self-administered medical abortion compared to provider-administered medical abortion for women of reproductive age seeking induced abortion (RCTs)**

**Self-administered medical abortion compared to provider-administered medical abortion for women of reproductive age seeking induced abortion (RCTs)**

**Patient or population:** women of reproductive age (15 to 49 years) seeking induced abortion
**Setting:** Hospitals and primary care clinics
**Intervention:** self-administered medical abortion
**Comparison:** provider-administered medical abortion

| Outcomes | Anticipated absolute effects* (95% CI) | | Relative effect (95% CI) | № of participants (studies) | Certainty of the evidence (GRADE) |
|---|---|---|---|---|---|
| | Risk with provider-administered medical abortion | Risk with self-administered medical abortion | | | |
| Success of medical abortion – RCTs<br><br>(Follow-up ranged from 14 days after mifepristone administration to after the completion of post-treatment menstruation) | 963 per 1000 | 954 per 1000 (934 to 973) | RR 0.99 (0.97 to 1.01) | 919 (2 RCTs) | Moderate[a] |
| Ongoing pregnancy – RCTs<br><br>(Follow-up 14 days after misoprostol administration and final follow-up occurred after the completion of post-treatment menstruation) | 8 per 1000 | 14 per 1000 (3 to 57) | RR 1.69 (0.41 to 7.02) | 735 (1 RCT) | Low[b, c] |
| Any complication requiring surgical intervention - RCT | No studies reported this outcome | | | | |

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).
**CI:** Confidence interval; **RCT:** randomized controlled trial; **RR:** Risk ratio

**GRADE Working Group grades of evidence**
**High certainty:** We are very confident that the true effect lies close to that of the estimate of the effect
**Moderate certainty:** We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
**Low certainty:** Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
**Very low certainty:** We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

[a]Downgraded by one level for high risk of bias. Li 2017 was classified as unclear risk of bias for this outcome because we rated three of the 'Risk of bias' domains as unclear (random sequence generation; allocation concealment; selective outcome reporting), one (blinding of outcome assessor) at high risk, and two at low risk (blinding of personnel and participants; incomplete outcome data). We judged Shrestha 2014 to be at unclear risk of bias for this outcome, because we rated three domains at low risk (random sequence generation; blinding of personnel and participants; incomplete outcome data), two at unclear risk (allocation concealment; selective outcome reporting), and one at high risk (blinding of outcome assessor).

[b]Downgraded by one level for imprecision, with wide confidence intervals, suggesting both an important increase or a decrease in the outcome. Given the low event rate (8) with a large sample size (735), we did not calculate the optimal information size because as in the GradePro Handbook under such circumstances, the judgement about precision may be based on the CI around the absolute effect.

[c]Downgraded by one level due to high risk of bias. We judged Li 2017 to be at unclear risk of bias for this outcome because we rated three of the 'Risk of bias' domains as unclear (random sequence generation; allocation concealment; selective outcome reporting), one (blinding of outcome assessor) at high risk, and two at low risk (blinding of personnel and participants; incomplete outcome data).

**Summary of findings 2. Self-administered medical abortion compared to provider-administered medical abortion for women of reproductive age seeking induced abortion (NRS)**

**Self-administered medical abortion compared to provider-administered medical abortion for women of reproductive age seeking induced abortion (NRSs)**

**Patient or population:** women of reproductive age (15 to 49 years) seeking induced abortion
**Setting:** Hospitals, family planning clinics, tertiary care facilities, non-governmental sites, government health facilities, abortion clinics, primary care clinics, university, and research centers
**Intervention:** self-administered medical abortion
**Comparison:** provider-administered medical abortion

| Outcomes | Anticipated absolute effects* (95% CI) | | Relative effect (95% CI) | № of participants (studies) | Certainty of the evidence (GRADE) |
|---|---|---|---|---|---|
| | Risk with provider-administered medical abortion | Risk with self-administered medical abortion | | | |
| Success of medical abortion - NRSs<br><br>(Follow-up ranged from 10 days after mifepristone or misoprostol administration to after the completion of post-treatment menstruation) | 940 per 1000 | 931 per 1000 (912 to 950) | RR 0.99 (0.97 to 1.01) | 10,124 (16 observational studies) | Very low[a] |
| Ongoing pregnancy - NRSs<br><br>(Follow-up ranged from 10 days after mifepristone or misoprostol administration to after the completion of post-treatment menstruation) | 8 per 1000 | 10 per 1000 (5 to 20) | RR 1.28 (0.65 to 2.49) | 6691 (11 observational studies) | Very low[b] |
| Any complication requiring surgical intervention - NRSs | 26 per 1000 | 56 per 1000 (21 to 150) | RR 2.14 (0.80 to 5.71) | 2452 | Very low[c, d] |

| | | | | |
|---|---|---|---|---|
| (Follow-up ranged from 10 days after mifepristone or misoprostol administration to after the completion of post-treatment menstruation) | | | | (3 observational studies) |

*__The risk in the intervention group__ (and its 95% confidence interval) is based on the assumed risk in the comparison group and the __relative effect__ of the intervention (and its 95% CI).
**CI:** Confidence interval; **NRS:** non-randomized study; **RR:** Risk ratio

**GRADE Working Group grades of evidence**
**High certainty:** We are very confident that the true effect lies close to that of the estimate of the effect
**Moderate certainty:** We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
**Low certainty:** Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
**Very low certainty:** We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

[a]Downgraded by one level from low certainty of evidence due to high risk of bias. Overall, we rated 16 prospective cohort studies at serious risk of bias because at least one 'Risk of bias' domain was judged to be at serious risk of bias. For each of these studies there was serious risk of bias in two domains: bias in measurement of outcomes and bias due to confounding. There was bias in measurement of outcomes because the outcomes, including success of medical abortion, were measured by assessors aware of the intervention received by the participants. There was a serious risk of bias due to confounding because the studies were not randomized and we do not know whether gestational age (a known confounder) had an independent effect on the outcome. In addition to bias due to measurement of outcomes and bias due to confounding, we judged Provansal 2009 to have a serious risk of bias due to missing data because outcome data were not available for over 20% of the participants. We strongly suspect publication bias for the success of medical abortion because the funnel plot is fairly asymmetrical. We therefore have limited confidence in the effect estimate of RR = 0.99.

[b]Downgraded by one level from low certainty of evidence due to high risk of bias. Overall, we rated 11 prospective cohort studies at serious risk of bias because at least one 'Risk of bias' domain was judged to be at serious risk of bias. For each of these studies there was serious risk of bias in two domains: bias in measurement of outcomes and bias due to confounding. There was bias in measurement of outcomes because the outcomes, including success of medical abortion, were measured by assessors aware of the intervention received by the participants. There was a serious risk of bias due to confounding because the studies were not randomized and we do not know whether gestational age (a known confounder) had an independent effect on the outcome. In addition to bias due to measurement of outcomes and bias due to confounding, we judged Provansal 2009 to have serious risk of bias due to missing data because outcome data were not available for over 20% of the participants. The funnel plot was asymmetrical. We therefore have limited confidence in the effect estimate of RR = 1.28.

[c]Downgraded by one level from low certainty of evidence due to high risk of bias. We rated all three prospective cohort studies at serious risk of bias because at least one 'Risk of bias' domain was judged to be at serious risk of bias. For each of these studies there was serious risk of bias in two domains: bias in measurement of outcomes and bias due to confounding. There was bias in measurement of outcomes because the outcomes, including success of medical abortion, were measured by assessors aware of the intervention received by the participants. There was a serious risk of bias due to confounding because the studies were not randomized and we do not know whether gestational age (a known confounder) had an independent effect on the outcome. In addition to bias due to measurement of outcomes and bias due to confounding, we judged Provansal 2009 to have serious risk of bias due to missing data because outcome data were not available for over 20% of the participants. There were fewer than 10 studies, so we did not conduct a funnel plot to assess for publication bias.

[d]The effect estimate was large (RR = 2.14), but there were plausible confounders that were not controlled for (e.g. gestational age), so we did not upgrade the certainty.

# BACKGROUND

## Description of the condition

Unsafe abortion is preventable, but it remains a major global health issue causing unnecessary threats to women's health and burdens on the health system. Globally, an estimated 25 million abortions (45% of the total 55.7 million) that occur every year are unsafe, with most (97%; 24 million) occurring in low-resource settings (Ganatra 2017) where countries that highly restrict abortion are concentrated (Singh 2018). Unsafe abortion results in an estimated 47,000 maternal deaths a year, and an additional 6.9 million women are estimated to suffer morbidities from complications due to unsafe abortion (Singh 2016; WHO 2012). The World Health Organization (WHO) defines unsafe abortion as a procedure for terminating an unintended pregnancy carried out by either a person lacking the necessary skills or in an environment that does not conform to minimal medical standards, or both (WHO 2011). Since 2000, with the advent and ubiquitous access to medical abortion drugs, safe abortion has increased, and abortion-related morbidity and mortality have improved (Singh 2018).

Medical abortion is a non-surgical termination procedure that uses pharmaceuticals, including a combination of mifepristone and misoprostol, or misoprostol alone, to terminate pregnancy. Medical abortion is proven to be highly safe, effective, and acceptable to women across diverse settings when administered up to 12 weeks gestation since the last menstrual period (Fjersted 2009; Kulier 2011; Rodriguez 2012; Trussell 1999; Winikoff 1997). The *WHO Medical Management of Abortion* guideline recommends the following combination regimen of mifepristone-misoprostol for induced abortion at less than 12 weeks gestational: a single dose of 200 mg oral mifepristone, followed by 800 µg of buccal, sublingual, or vaginal misoprostol 24 to 48 hours later (WHO 2018). For pregnancies at 12 weeks or longer, 400 µg buccal, vaginal, or sublingual misoprostol every three hours 24 to 48 hours after taking 200 mg mifepristone is recommended (WHO 2018). In settings where mifepristone is unavailable, the WHO recommends a misoprostol-only regimen of 800 µg of buccal, vaginal, or sublingual misoprostol (WHO 2018), although this method is known to be less effective than the mifepristone-misoprostol protocol (Blum 2012; Jain 2002; Raymond 2019; Sedgh 2016; Singh 2018). In both regimens, repeat doses of misoprostol can be given when necessary to successfully terminate the pregnancy.

However, women's access to medical abortion remains constrained in part by government regulations and medical provision guidelines as to where and how the procedure can be administered, and by whom (Shannon 2008). The trend is well-established that women, especially those in low-resource and legally-restricted settings, are increasingly obtaining abortifacients through informal and unreliable channels, including pharmacies, drug sellers, and online services without prescription, which may place them at greater risk of receiving poor-quality drugs, inadequate information, and no referrals for management of complications (Bernabé-Ortiz 2009; Footman 2017; Footman 2018a; Ganle 2019; Hendrickson 2016; Huda 2014; Jejeebhoy 2012; Jelinska 2018; Kapp 2017; Lara 2011; Murtagh 2018; Powell-Jackson 2015; Reiss 2016; Rocca 2018; Rodriguez 2012; Sneeringer 2012; Tamang 2015; Tamang 2018).

Medical abortions may occur in the clinic or at home, and may be managed by healthcare providers or women themselves, or a combination of the two. The WHO recommends that the following types of healthcare providers can manage early medical abortion procedures in low- or high-resource settings after undergoing task-specific training on monitoring, supervision, and referral: specialist doctors (e.g. obstetricians), non-specialist doctors (e.g. general practitioners); advanced associate and associate clinicians; midwives; nurses; auxiliary nurse midwives and auxiliary nurses; and doctors of complementary systems of medicine. Pharmacists and lay health workers can manage specific tasks, such as assessing eligibility for medical abortion, administering the medications and managing the process of common side-effects independently, and assessing the completion of the procedure and the need for further clinic-based follow-up (WHO 2015). There is a growing body of research demonstrating that women can manage their own abortions with little or no healthcare provider supervision, so long as they receive accurate and adequate information, high-quality drugs, and have access to facility-based care in case of complications (Footman 2018a; Shannon 2008; WHO 2012; WHO 2014). Additionally, women overwhelmingly prefer to administer abortion drugs at home (Raymond 2019; Shrestha 2018; WHO 2014), with self-administered medical abortion becoming increasingly common for greater control and privacy around the procedure (Hyman 2013; Kero 2009; Platais 2016; Song 2018; Tan 2018).

While home-based medical abortion has been shown to be effective, safe, and acceptable to women compared to clinic-based procedures (Ngo 2011), it remains unclear whether self-administered medical abortion is as effective, safe, and acceptable compared to procedures administered under healthcare provider supervision (i.e. provider-administered medical abortion). To fill this evidence gap, we reviewed the evidence on the comparative effectiveness, safety, and acceptability of self-administered versus provider-administered medical abortion, in any setting.

## Description of the intervention

The medical abortion intervention involves one or two abortifacients, depending on the regimen: combined mifepristone-misoprostol or misoprostol-only. Mifepristone, also known as RU486, is a pill taken orally that blocks the effects of progesterone, a hormone needed for pregnancy, and causes the uterus to contract. Misoprostol, a synthetic prostaglandin E1 analogue, can be taken orally, sublingually, buccally, or vaginally, and induces an abortion by causing contractions and bleeding to empty the uterus of conception products.

This review focuses on the administration of abortifacients using the regimen of mifepristone-misoprostol or misoprostol-only, comparing self-administration to provider-administration of medical abortion. In a provider-administered procedure, drugs are administered in the presence of healthcare provider supervision, including physicians, midwives, nurses, and any other healthcare providers trained in managing medical abortion. In self-administered medical abortion, drugs are administered by the woman herself (e.g. pill(s) inserted into her mouth or vagina) without the supervision of a healthcare provider, during at least one stage of the drug regimen. The medical abortion regimen may take place in one of three scenarios: 1) the woman takes both mifepristone and misoprostol without healthcare provider supervision; 2) the woman takes misoprostol-only without healthcare provider supervision; or 3) the woman takes mifepristone in the presence of a healthcare provider,

and subsequently takes misoprostol without healthcare provider supervision (e.g. at home). For both provider- and self-administration, mifepristone is administered orally, whereas misoprostol can be administered orally, sublingually, buccally, or vaginally. Repeat doses of misoprostol may be administered buccally, vaginally, or sublingually (WHO 2018).

### How the intervention might work

#### Self-administration

The overall process of self-management of abortion includes an eligibility assessment, the self-administration of drugs, and a self-assessment of complete abortion; however, this review focuses only on the self-administration of drugs as defined above. Self-administration may occur in a health facility or at home. Usually, self-administration of medical abortion occurs at home because it is unlikely that a healthcare provider will give medical abortion supervision in a woman's home. However, it is possible that self-administration of medical abortion could occur at a health facility if the woman takes the drugs on her own without supervision by a provider in the health facility.

Self-administration seeks to expand access to medical abortion by allowing women to take the medical abortion drug(s) in the privacy of their own homes and with support from their friends, partners, or family, if desired, and is therefore often reported as more acceptable than having medical abortion in a health facility. Furthermore, self-administration is empowering for women as the process allows them to have a role in managing their own health, specifically having a choice in and control over their pregnancy termination procedures. It also reduces the burden on the healthcare system, particularly in low-resource settings, where there are insufficient providers to administer safe abortions, as well as reducing the burden on women, who may have significant socio-economic constraints to accessing facility-based abortions, including transportation and medical costs. It may be beneficial to prioritize facility-based abortion care for circumstances of pregnancy requiring special attention and equipment, including advanced pregnancies, high-risk pregnancies, and the management of abortion complications (WHO 2014). Regardless of the location of medical abortion, all women must have access to accurate information and healthcare services, if needed.

#### Abortifacients: mifepristone and misoprostol

In settings where mifepristone is unavailable a misoprostol-only regimen is recommended, although it is less effective than a combined regimen. Since misoprostol is inexpensive and stable at room temperature, it may be particularly suitable for use in low-resource settings, where healthcare infrastructure is inadequate to support storage facilities and transportation of supplies between sites (Kim 2017).

### Why it is important to do this review

Despite being preventable, most unsafe abortions account for 8% to 18% of all maternal mortality (Ganatra 2017; WHO 2011). In these settings, unsafe abortion can be attributed in part to inadequate healthcare infrastructure, the lack of trained providers, and poor knowledge about lawful access to safe termination services, as well as legal restrictions and stigma associated with abortion (WHO 2011). Given that the mifepristone-misoprostol regimen is known to be highly effective and has been shown to be easily self-administered with little or no healthcare provider supervision (Harper 2007; Shannon 2008), self-administration of medical abortion may be a key strategy to significantly improve abortion-related morbidity and mortality in low-resource settings. It may also reduce the burden on the healthcare system where there are insufficient trained providers to administer safe abortions, and it can increase access to safe procedures for marginalized women who are at risk of unsafe abortions (Kapp 2017; Wainwright 2015).

Furthermore, there is inconclusive evidence about whether clinical supervision is necessary and whether self-administration of medical abortion is as safe and effective. The efficacy and acceptability of home use of misoprostol is well documented, but research on self-use of mifepristone, as part of a combined mifepristone-misoprostol regimen, is still nascent (Banerjee 2018). It is important to understand whether women can safely and effectively terminate their own pregnancies using medical abortion without healthcare provider supervision, and whether a strategy of informed choice over restricted provision meets their needs. This review will contribute to filling this evidence gap by evaluating whether self-administered medical abortion is as effective, safe, and acceptable as provider-administered medical abortion.

## OBJECTIVES

To compare the effectiveness, safety, and acceptability of self-administered versus provider-administered medical abortion in any setting.

## METHODS

### Criteria for considering studies for this review

#### Types of studies

We searched for published studies on self-administered compared to provider-administered medical abortion that used different drug regimens (i.e. mifepristone-misoprostol or misoprostol-only), routes of administration (i.e. oral, sublingual, buccal, vaginal), and at varied dosages of misoprostol. Randomized controlled trials (RCTs) and non-randomized studies (NRSs) (clustered or non-clustered) and prospective cohort studies with a concurrent comparison group, that compared the safety, or effectiveness, or both, of medical abortion administered by women themselves (self-administration) to those administered by healthcare providers (e.g. specialist doctor, non-specialist doctor; advanced associate clinician; associate clinician; midwife; nurse; auxiliary nurse midwife and auxiliary nurse; doctor of complementary systems of medicine; or pharmacist) were eligible for inclusion. We included NRSs and prospective observational studies with concurrent controls because:

- we did not expect to find many RCTs, given that most studies incorporate the women's right to choose how they prefer the procedure to be administered;
- many studies may have been implemented in legally-restricted settings where RCTs may not be possible; and
- observational studies are recognized as an important mechanism to detect serious and uncommon harms.

We also did not expect to find many studies that blinded the healthcare provider or the outcome assessor of the medical

abortion protocol, although it is feasible that the outcome assessor (the person who performed the clinical exam to assess abortion completion at follow-up) could be blinded to the group assignment. Studies were eligible to be included in this review if they met the following inclusion criteria:

- have a comparison between self-administered medical abortion versus provider-administered medical abortion;
- have a prospective assessment of outcomes; and
- include women of reproductive age (15 to 49 years) who were seeking an induced abortion.

### Types of participants

Studies recruiting women of reproductive age, in high-, middle-, or low-resource settings, who sought to terminate pregnancies and provided informed consent, were eligible for the review. We excluded from the review studies recruiting women with missed or incomplete abortion, or intrauterine fetal death. Studies were eligible irrespective of the gestational age of the fetus, and we planned to explore the possible impact of this variable on the results by subgroup analysis.

### Types of interventions

Studies comparing induced medical abortion procedures, using mifepristone-misoprostol or misoprostol-only, administered by women themselves versus those administered by healthcare providers (e.g. doctors, specialist doctors, non-specialist doctors, associate clinicians, midwives, nurses, auxiliary nurses, and auxiliary nurse midwives) were eligible for this review. The only administration route (for provider- and self-administration) for mifepristone was oral. Possible provider- and self-administration routes for misoprostol included oral, sublingual, buccal, and vaginal. Repeat doses of misoprostol could occur. We considered the following medical abortion scenarios:

- the woman takes both mifepristone and misoprostol without healthcare provider supervision;
- the woman takes misoprostol-only without healthcare provider supervision; and
- the woman takes mifepristone in the presence of a healthcare provider, and subsequently takes misoprostol without healthcare provider supervision (e.g. at home).

### Types of outcome measures

#### *Primary outcomes*

The primary outcome was successful abortion (effectiveness), defined as complete uterine evacuation without the need for surgical intervention.

#### *Secondary outcomes*

The secondary outcomes were:

- ongoing pregnancy (measurement of success or effectiveness);
- complications requiring surgical intervention (a measurement of safety), which included hemorrhage, infection, any complication requiring hospitalization, incomplete medical abortion, hematoma; and complications resulting from advanced pregnancies, including but not limited to uterine rupture, hysterectomy, and mortality;
- side effects, which included nausea, heavy bleeding, diarrhea, fever/chills, pain/cramps, and vomiting;
- acceptability, as defined by the woman's level of satisfaction with the medical abortion method, the woman's likelihood of selecting the medical abortion procedure again, and the woman's likelihood of recommending the procedure to a friend.

Although serious complications (e.g. death) are rare (Ngo 2011), the above list of complications includes those typically reported in the literature and were therefore important to document.

Reporting of the secondary outcomes were not an inclusion criterion for the review and we included studies regardless of the assessment of these outcomes.

## Search methods for identification of studies

We searched for all published and unpublished RCTs and prospective cohort studies of self-administered medical abortion with a concurrent comparison group versus provider-administered medical abortion, without language restriction and in consultation with a Fertility Regulation Review Group Information Specialist.

### Electronic searches

We searched the following electronic databases for relevant trials and studies:

- Cochrane Central Register of Controlled Trials (Ovid EBM Reviews) (1991 to July 2019) (Date searched 3 May 2018; update search 10 July 2019)
- MEDLINE (Ovid) Epub Ahead of Print, In-Process and Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) (1946 to 9 July 2019) (Date searched 3 May 2018; update search 10 July 2019)
- Embase (Ovid) (1980 to 10 July 2019) (Date searched 3 May 2018; update search 10 July 2019)
- CINAHL Plus with Full text (EBSCOHost) (1937 to 10 July 2019) (Date searched 3 May 2018; update search 10 July 2019)
- LILACS (lilacs.bvsalud.org/en/) (1982 to 10 July 2019) (Date searched 3 May 2018; update search 10 July 2019)
- POPLINE (www.popline.org/) (1973 to 10 July 2019) (Date searched 3 May 2018; update search 10 July 2019)

We also searched the following trial registers for ongoing and registered trials:

- ClinicalTrials.gov (Date searched 10 July 2019) (Date searched 3 May 2018; update search 10 July 2019)
- World Health Organization International Clinical Trials Registry Platform (WHO ICTRP) (apps.who.int/trialsearch/) (Date searched 3 May 2018; update search 10 July 2019)
- Google Scholar (Date searched 3 May 2018; update search 10 July 2019)

We also searched Google Scholar for recent trials not yet indexed in the major databases.

Search strategies for the 2019 update search are available in Appendix 1.

### Searching other resources

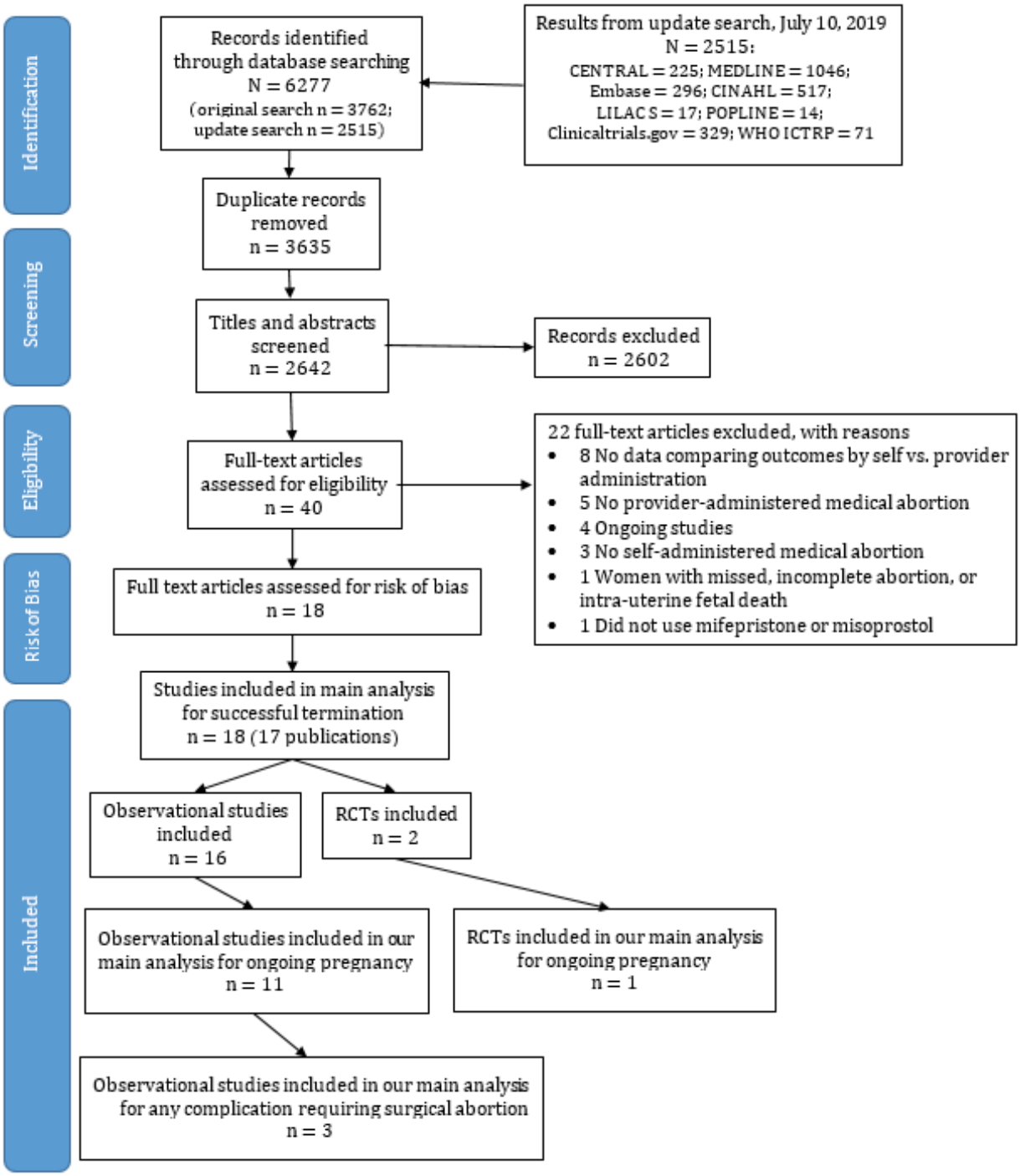
We handsearched reference lists of relevant trials and systematic reviews retrieved by the search to identify eligible RCTs and prospective cohort studies of self-administered medical abortion with a concurrent comparison group versus provider-administered medical abortion, and contacted experts in the field to obtain additional data. We also searched the following websites for relevant papers: Marie Stopes International, Ipas, Gynuity Health Projects, Population Council, and the International Consortium for Medical Abortion.

## Data collection and analysis

### Selection of studies

Two review authors (KG and KN), working independently, used Covidence software to screen titles and abstracts retrieved by the search. Next, they retrieved the full texts of all potentially eligible studies, and independently examined these full-text articles against inclusion and exclusion criteria to select eligible studies. They resolved disagreements and concerns about eligibility by discussion and if necessary by consulting a third review author (CK). Two studies (Dagousset 2004; Provansal 2009) were translated from French to English by a researcher who spoke fluent French and English. We documented the selection process using the PRISMA diagram (Figure 1; Higgins 2011; Moher 2009). We listed all studies excluded after full-text assessment and their reasons for exclusion in the Characteristics of excluded studies table.

**Figure 1. PRISMA flow diagram**




### Data extraction and management

Two review authors (KG and KN) independently screened and extracted data from eligible studies using a data extraction form designed and piloted by the review authors, resolving any disagreements by discussion and referral to the full-text articles. We extracted data using a tool tailored to the inclusion criteria described above, including study design and key features of studies as follows:

- **Population.** Mean gestational age; mean participant age; percentage married; primigravida, measured by percentage; percentage of women who experienced their first abortion in this study; and mean years of education. We also extracted data on the number and percentage of women who were lost to follow-up and the number and percentage of women who self-selected into each group for NRSs.

- **Intervention**. We recorded the description of the intervention, including the drugs used, dosage, number of doses, and routes of administration, as well as each study's inclusion and exclusion criteria. Drug regimens include either mifepristone-misoprostol or misoprostol-only. We extracted data on each dose of each drug measured in µg or mg, as well as the route of administration for each dose (i.e. oral, sublingual, buccal, or vaginal). We included data on provider administration in a health facility followed by self-administration at home (which overall we define as self-administration in this review), self-administration in the health facility, and self-administration at home.
- **Comparison groups.** Comparison groups included provider administration in a health facility. We did not identify any studies with provider administration at home. We recorded the number of women recruited to each comparison group, including the location of the medical abortion, and the number of complete abortions.
- **Outcomes**. The proportion of women with successful abortion (uterine evacuation without the need for surgical intervention) was the primary outcome, and therefore the most important outcome for this review. We extracted data on the complications and side effects reported in the studies, described how each was defined and documented, and summarized the findings. We include a detailed list of complications and side effects in the 'Secondary outcomes' section. We also extracted data on acceptability, including the number and proportion of women who were satisfied or highly satisfied with the method, the number and proportion of women who would choose the method again, and the number and proportion of women who would recommend the method to a friend (the latter two outcomes were not indicated in our protocol). We also extracted additional data on the following subsidiary outcomes which were not indicated in our protocol: contact with health services; compliance with the medical abortion protocol; and best and worst features of medical abortion method.

We corresponded with study investigators for further data on methods, results, or both, as required. The data extraction tool can be found in Appendix 2.

### Assessment of risk of bias in included studies

Two review authors (KG and KN) independently assessed the quality of the RCTs using the Cochrane 'Risk of bias' tool across the following domains: selection (random sequence generation and allocation concealment); performance (blinding of participants and personnel); detection (blinding of outcome assessors); attrition (incomplete outcome data including attrition and exclusions from the analysis); reporting (selective outcome reporting); and other potential sources of bias (Higgins 2019). We assigned classifications of bias as detailed in the *Cochrane Handbook for Systematic Reviews of Interventions,* Section 8.5 in the 'Risk of bias' table (Higgins 2017). In brief, we assigned a classification of bias (high, low, or unclear) for individual elements of these domains. The assessments considered the risk of material bias (bias of sufficient magnitude to have a notable impact on the results or conclusions of the trial, recognizing that subjectivity is involved in any such classification) rather than any bias. We classified summary assessments for each domain within and across studies as follows:

- Low risk of bias: low risk of bias for all key domains (within a study); most information is from studies at low risk of bias (across studies)
- Unclear risk of bias: insufficient detail reported to permit a judgement of 'low risk' or 'high risk' (domain-specific); two or more domains judged to be at unclear risk of bias (overall study)
- High risk of bias: high risk of bias for one or more key domains (within a study); the proportion of information from studies at high risk of bias is sufficient to affect the interpretation of results (across studies)

The same review authors used the ROBINS-I tool to independently assess risks of bias for NRSs included in the review across the following domains (Sterne 2016): confounding; co-interventions; selection bias; deviations from intended interventions; missing data; measurement of outcomes; and selection of the reported result. For assessment of confounding, we considered gestational age, a known important confounder, with higher gestational ages indicating lower efficacy (Kahn 2000; Ngo 2011). We assigned classifications of bias for each of these domains as follows (Sterne 2016):

- Low risk of bias: the study is comparable to a well-performed randomized trial for this domain;
- Moderate risk of bias: the study is sound for a NRS for this domain, but cannot be considered comparable to a well-performed randomized trial;
- Serious risk of bias: the study has some important problems in this domain;
- Critical risk of bias: the study is too problematic in this domain to provide any useful evidence on the effects of the intervention;
- No information on which to base a judgement about risk of bias for this domain.

We did not classify any of the NRSs as having a critical risk of bias, and therefore, in line with the ROBINS-I tool recommendation, we included all of the studies in our main effects analysis. The 'Risk of bias' effect on an intervention may vary for different outcomes. For all 18 included studies, we therefore completed a 'Risk of bias' assessment for the three most important outcomes:

- Successful abortion; primary outcome measuring effectiveness
- Ongoing pregnancy; secondary outcome measuring effectiveness
- Any complication requiring surgical intervention; secondary outcome measuring safety

### Measures of treatment effect

For dichotomous outcomes (e.g. successful abortion, ongoing pregnancy, any complication requiring surgical intervention, among others), we used the number of events in the control (provider-administered) and intervention (self-administered) groups of each study to calculate Mantel-Haenszel risk ratios (RRs). We presented 95% confidence intervals (CIs) for all outcomes in our main effects analysis and for two secondary outcomes (complications and acceptability). Where data to calculate RRs or mean differences (MDs) were not available, we used the most detailed numerical data available to facilitate similar analyses of included studies (e.g. test statistics, P values). We reported summary statistics and narrative syntheses for the following secondary and subsidiary outcomes:

- Side effects
- Compliance with medical abortion protocol
- Best and worst features of medical abortion method

### Unit of analysis issues

The primary unit of analysis was the woman randomized for RCTs and the woman who underwent medical abortion (classified as self-administered or provider-administered) for NRSs. We did not identify any cluster-RCTs to include in the review. If we had identified studies of a cluster design we would have sought adjusted data, with adjustments made based on an estimate of the intracluster correlation coefficient (ICC) where appropriate (Higgins 2019). We summarized data that were not valid for analysis in the 'Other data' table (Table 1), which includes data that were not estimable in the meta-analysis, incomplete data (e.g. missing data for one group), and unpublished data.

### Dealing with missing data

We analyzed the data on an intention-to-treat (ITT) basis as far as possible. We made three attempts within three months to contact the authors of studies for missing data (e.g. disaggregated outcome data for provider-administered and self-administered groups), including the authors of studies whose eligibility for inclusion depended on unpublished information. We included the outcome data received from the study authors. We deviated from our protocol because instead of analyzing only the available data, we included data published in a previous systematic review (Ngo 2011), and for missing data not published in Ngo 2011 we calculated the missing data using simple mathematical calculations where appropriate, such as converting percentages to count data (details are described in Table 1).

### Assessment of heterogeneity

We assessed statistical heterogeneity with $Chi^2$ and $I^2$ statistics, using a cut-off point of $P < 0.10$ to indicate statistical heterogeneity, and we used the $I^2$ statistic to quantify heterogeneity. We used the Cochrane Handbook criteria for interpreting $I^2$ values (Deeks 2017; Section 9.5.2).

### Assessment of reporting biases

Considering the difficulty of detecting and correcting for publication bias and other reporting biases, we aimed to minimize their potential impact by ensuring a comprehensive search for eligible studies and by being alert for duplication of data. We intended to perform funnel plot analysis if there were more than 10 studies in any of the effects analyses, to explore the possibility of small-study effects. We only performed two funnel plots, one for successful abortion (primary outcome), and one for ongoing pregnancy because any complication requiring surgical intervention included fewer than 10 studies.

### Data synthesis

In a change from our published protocol, the principal measure of effect was the risk ratio (RR) of having a successful self-administered medical abortion termination compared to having a successful provider-administered medical abortion, and the 95% confidence interval (CI) of the RR. We calculated the RR of having a successful abortion using the number of women recruited for each study and an ITT approach. We sought and retrieved adjusted ITT data from study authors. If ITT data were not available, we used a per protocol approach. If the studies reported a mix of data types (i.e. ITT and per protocol data) for an outcome, we combined the data types in the analysis. We synthesized effectiveness in a meta-analysis using a random-effects model to produce a pooled RR and its 95% CI. We selected this model a priori to incorporate the effect of trial heterogeneity among prospective studies from different settings (Ngo 2011).

We conducted a meta-analysis on successful abortion, ongoing pregnancy, complications, and acceptability. We present a forest plot showing the RR and its 95% CI for the primary outcome. To assess risks of bias, we grouped RCTs and NRSs separately when summarizing the effect size of the outcomes, given that the NRSs were classified as being at unclear risk of bias compared to RCTs with moderate risk of bias. We present separate effect size analyses for RCTs and NRSs in separate tables. We have documented and summarized data on dosage, number of doses of mifepristone-misoprostol, and route of administration (e.g. oral, sublingual, buccal, or vaginal), to compare by mode of administration (self versus provider) (Table 2).

We performed statistical analysis using Review Manager 5 (Review Manager 2014).

### Subgroup analysis and investigation of heterogeneity

We combined the results to find a common effect across those studies by conducting a meta-analysis, using the random-effects model because of varying study type and differences in resource settings. If we detected substantial heterogeneity, we explored possible explanations in subgroup analyses using Review Manager 5 (Review Manager 2014) to assess whether the effect of self-administered medical abortion was influenced by gestational age or by type of resource setting, or by both.

We prespecified two subgroups as explanatory variables for the meta-regression for the primary outcome measure.

- Gestational age (e.g. < 9 weeks, 9 to 12 weeks, and ≥ 12 weeks).
- Low- to middle-resource settings versus high-resource settings (as defined by the study authors).

We expected early gestational age (e.g. less than nine weeks) and high-resource settings to be associated with increased effectiveness of the intervention (Ngo 2011).

We conducted the meta-regression using standard weighted (by standard error of estimate) linear regression using Review Manager 5 (Higgins 2019; Review Manager 2014). When interpreting the results, we assessed statistical heterogeneity, especially when there was any variation in the direction of the effect.

### Sensitivity analysis

We intended to conduct a sensitivity analysis to assess heterogeneity and the effect of the risks of bias in the included studies, comparing studies rated at high, low, and unclear risk of bias according to the Cochrane 'Risk of bias' tool for RCTs (Higgins 2017), and critical, serious, moderate, and low according to the ROBINS-I tool for observational studies (Sterne 2016). We did not conduct a sensitivity analysis to assess the effect of the risk of bias of the studies included in the main effects analysis, because all 16 NRSs were classified at serious risk as given in the ROBINS-I

tool (Table 3). Both RCTs (Li 2017; Shrestha 2014) were classified as being at unclear risk by the Cochrane 'Risk of bias' tool for RCTs (Table 4).

We did not conduct a separate analysis of high-quality studies to explore the effect of biases on study heterogeneity as planned, because we rated the quality of evidence by outcome in Summary of findings for the main comparison using the Cochrane 'Risk of bias' tool for RCTs.

#### *Summary of findings and assessment of the certainty of the evidence*

We used the GRADE approach and Cochrane methods to assess the certainty of the evidence, and created a 'Summary of findings' table (GRADEpro GDT 2015; Schünemann 2017).

We had intended that the table would evaluate the overall certainty of the body of evidence for all the main review outcomes, but, given limitations in the number outcomes included in the table, we restricted the tables to the primary outcome: successful abortion (uterine evacuation without the need for surgical intervention); and two key secondary outcomes: ongoing pregnancy; and any complication requiring surgical intervention.

Two review authors (KG and CK) worked independently to classify the evidence certainty (e.g. high, moderate, low, or very low). For RCTs, we downgraded a starting rating of 'high certainty' evidence by one level for serious concerns (or by two levels for very serious concerns) about risk of bias, inconsistency, indirectness, imprecision, and publication bias. For NRSs, we took the same downgrade approach, but with a baseline rating of 'low certainty'. We resolved disagreements by discussion and with guidance from the Cochrane Methods Group. The review authors justified, documented, and incorporated their judgements into reporting the results of each outcome. One review author (KG) extracted study data, formatted comparisons in data tables, and prepared 'Summary of findings' tables before writing the results and conclusions of our review (Summary of findings for the main comparison; Summary of findings 2).

# RESULTS

## Description of studies

### Results of the search

The combined results of all literature searches are illustrated in the PRISMA flow diagram (Figure 1).

From the 6277 records identified, 2642 were unique references after removing 3635 duplicates. Two thousand six hundred and two references were irrelevant for our review (e.g. review articles, retrospective studies, qualitative studies, did not compare outcomes by self-administered versus provider-administered medical abortion) and 40 full-text articles met the inclusion criteria and were retrieved. Of the 40, 18 studies met our inclusion criteria and we included them in the review. No prospectively-registered ongoing studies met the inclusion criteria. We did not find any new studies that met our eligibility criteria through Google Scholar, or handsearching websites.

### Included studies

Eighteen studies met our inclusion criteria and were included in the review. The Characteristics of included studies table includes information on study methods, participants, interventions, outcomes, funding, and other details, such as whether data from the study were published. All 18 studies reported on our primary outcome, successful abortion. In addition, 11 studies (Akin 2004; Alam 2018; Bracken 2006; Bracken 2010; Dagousset 2004; Hajri 2004; Iyengar 2016; Karki 2009; Ngoc 2004; Provansal 2009; Shuchita 2008) reported on ongoing pregnancy, and three studies (Alam 2018; Dagousset 2004; Provansal 2009) reported on any complication requiring surgical intervention. One report (Elul 2001 - Tunisia; Elul 2001 - Vietnam) included two studies, which are identified by study setting (Tunisia and Vietnam). Studies varied in the way they reported the secondary and subsidiary outcomes listed in the Methods section.

#### *Main effects analysis*

For the main effects analysis we included all 18 studies: 919 women from the two RCTs (Li 2017; Shrestha 2014) and 10,124 women from the 16 NRSs (Akin 2004; Alam 2013; Alam 2018; Bracken 2006; Bracken 2010; Dagousset 2004; Elul 2001 - Tunisia; Elul 2001 - Vietnam; Hajri 2004; Iyengar 2016; Karki 2009; Ngoc 2004; Okonufua 2014; Provansal 2009; Raghavan 2012; Shuchita 2008).

#### *Study design*

Of the 18 studies included in our main effects analysis, two were RCTs (Li 2017; Shrestha 2014) and 16 were prospective cohort studies (Akin 2004; Alam 2013; Alam 2018; Bracken 2006; Bracken 2010; Dagousset 2004; Elul 2001 - Tunisia; Elul 2001 - Vietnam; Hajri 2004; Iyengar 2016; Karki 2009; Ngoc 2004; Okonufua 2014; Provansal 2009; Raghavan 2012; Shuchita 2008).

The data reported by each study varied. Three of the 18 studies used ITT data (Akin 2004; Dagousset 2004; Shuchita 2008), while the remaining 15 studies used per protocol data. Nine studies included pilot groups (Akin 2004; Alam 2013; Alam 2018; Bracken 2006; Elul 2001 - Tunisia; Hajri 2004; Karki 2009; Ngoc 2004; Shuchita 2008). Additional misoprostol was offered to women in seven studies (Alam 2013; Alam 2018; Dagousset 2004; Iyengar 2016; Provansal 2009; Raghavan 2012; Shrestha 2014). Only one study (Shrestha 2014) reported on successful abortion by additional doses of misoprostol. Details are provided in the Characteristics of included studies tables.

#### *Setting*

Sixteen studies were conducted in low-to-middle-resource settings (seven from Southeast Asia: Bangladesh (Alam 2013; Alam 2018), India (Bracken 2010; Iyengar 2016; Shuchita 2008), Nepal (Karki 2009; Shrestha 2014); four from East Asia: China (Li 2017), Vietnam (Elul 2001 - Vietnam; Ngoc 2004; Raghavan 2012); three from Africa: Tunisia (Elul 2001 - Tunisia; Hajri 2004) and Nigeria (Okonufua 2014); one from Southeast Europe: Albania (Bracken 2006); one from Western Europe: Turkey (Akin 2004)); and two studies (Dagousset 2004; Provansal 2009) were conducted in high-resource settings (France). Details are provided in the Characteristics of included studies tables.

### *Participants*

From the 18 included studies, 11,043 women were included in our main effects analysis. Most participants included in the studies were adult women, aged 18 to 49 years. The overall mean age range was 24.3 years (Okonufua 2014) to 32.2 years (Elul 2001 - Tunisia). The maximum gestational age was less than nine weeks for 13 studies, and up to and including nine weeks for the remaining five studies. We did not find any eligible studies that recruited women with gestational ages over nine weeks. Two studies (Elul 2001 - Tunisia; Elul 2001 - Vietnam) did not compare participant characteristics at baseline. Details on participants are provided in the 'Baseline characteristics of included studies' table (Table 5).

Six studies (Bracken 2010; Dagousset 2004; Hajri 2004; Iyengar 2016; Ngoc 2004; Provansal 2009) reported statistically significant differences between the self-administered and provider-administered groups at baseline. One French study (Dagousset 2004) reported that women in the self-administered group were older and more educated, and that fewer of them were primigravida compared to women in the provider-administered group. The other French study (Provansal 2009) reported that women in the self-administered group were older ($P < 0.001$), had higher gravidity and parity ($P < 0.001$), and lower gestational age ($P < 0.001$) compared to women in the provider-administration group. One Indian study (Bracken 2010) reported that the provider-administered group was significantly younger than the self-administered group ($P = 0.01$). Another Indian study (Iyengar 2016) reported that women in the self-administered group were more likely to be younger ($P = 0.02$) and to have lower gestational age and fewer children when compared to the provider-administered group. One Tunisian study (Hajri 2004) reported that the self-administered group was more educated ($P = 0.02$). One Vietnamese study (Ngoc 2004) reported that women in the self-administered group were more educated, had lower gestational age and higher gravidity, and that fewer were primigravida at baseline.

### *Providers*

All studies reported using trained providers for medical abortion service provision, including physicians, paramedics, nurses, gynecologists, Bachelor of Medicine students, Bachelor of Surgery (MBBS) students trained in medical abortion, and other unspecified trained health facility workers. Five studies (Akin 2004; Elul 2001 - Tunisia; Hajri 2004; Karki 2009; Shuchita 2008) reported that providers were newly-trained, with no prior experience in medical abortion procedures. Nine studies (Alam 2013; Alam 2018; Bracken 2006; Bracken 2010; Iyengar 2016; Ngoc 2004; Okonufua 2014; Provansal 2009; Raghavan 2012) reported that providers were trained in medical abortion, but did not provide details on the type and extent of training.

### *Funding*

One study (Alam 2013) received analgesics from a pharmaceutical company. Six studies did not report on funding; nine studies received all or partial funding from an anonymous donor. Six studies received funding from government agencies, private foundations, or non-profit bodies. Details are provided in the Characteristics of included studies tables.

### *Intervention*

The intervention in all the included studies involved the administration of the combined mifepristone-misoprostol regimen. All studies in this analysis involved provider-administered oral mifepristone in the clinic or hospital, followed by the option of provider-administered misoprostol in the clinic or hospital (provider-administration group; n = 2384) or self-administered misoprostol at home (self-administration group; n = 5966), 24 to 48 hours later. At least one stage of the regimen was therefore supervised by a provider in all included studies. No women self-administered both mifepristone and misoprostol at home, or administered a misoprostol-only regimen.

Doses of mifepristone and misoprostol were generally similar across studies, although routes of administration differed. In almost all the studies, women took 200 mg of oral mifepristone followed by 400 µg of misoprostol. Exceptions included 600 mg of mifepristone (Dagousset 2004; Provansal 2009); and 800 µg of misoprostol (Alam 2013; Alam 2018; Iyengar 2016; Provansal 2009). Misoprostol was administered orally in most studies (Akin 2004; Bracken 2006; Bracken 2010; Dagousset 2004; Elul 2001 - Tunisia; Elul 2001 - Vietnam; Hajri 2004; Karki 2009; Li 2017; Ngoc 2004; Okonufua 2014; Provansal 2009; Raghavan 2012); buccally in two studies (Alam 2013; Alam 2018); vaginally in one study (Shrestha 2014); and sublingually in one study (Shuchita 2008). One study (Iyengar 2016) did not specify the route for women who self-administered misoprostol, while the routes (i.e. oral, sublingual, or vaginal) varied depending on the clinic for the provider-administered group.

The time between mifepristone and misoprostol was 48 hours for most studies; 24 hours for four studies (Alam 2013; Alam 2018; Li 2017; Shrestha 2014); 36 to 48 hours for one study (Provansal 2009); and three days for the provider-administered group for two studies (Elul 2001 - Tunisia; Elul 2001 - Vietnam). The time between mifepristone and misoprostol administration was not reported in one study (Dagousset 2004).

Additional misoprostol was offered to women in three studies (400 µg Dagousset 2004; Iyengar 2016; 800 µg Alam 2013). In one study (Dagousset 2004), only women in the provider-administered group were offered an additional 400 µg. Only one study (Shrestha 2014) reported success rates by additional doses of misoprostol. Participants were offered pain medications (i.e. paracetamol, ibuprofen, or paracetamol with codeine) in 15 studies. In one study (Shrestha 2014), women were also offered nimesulide. Intervention details are described in the Characteristics of included studies tables and Table 2.

### *Comparators*

All studies included concurrent comparison groups. Participants in the comparison groups underwent provider-administered medical abortion in the clinic or hospital.

### *Length of follow-up*

All studies specified length of follow-up. This was 14 days after mifepristone administration for most of the studies (Akin 2004; Bracken 2006; Bracken 2010; Elul 2001 - Tunisia; Elul 2001 - Vietnam; Hajri 2004; Ngoc 2004; Okonufua 2014; Raghavan 2012; Shrestha 2014; Shuchita 2008). The length of follow-up varied between 10 to 20 days after mifepristone or misoprostol

administration for the remaining studies: 10 to 20 days after misoprostol administration (Provansal 2009); 10 to 14 days after mifepristone administration (Alam 2013; Alam 2018); 10 to 15 days after mifepristone administration (Dagousset 2004; Iyengar 2016), 12 days after mifepristone administration (Karki 2009); and for Li 2017, the final follow-up occurred after the completion of post-treatment menstruation.

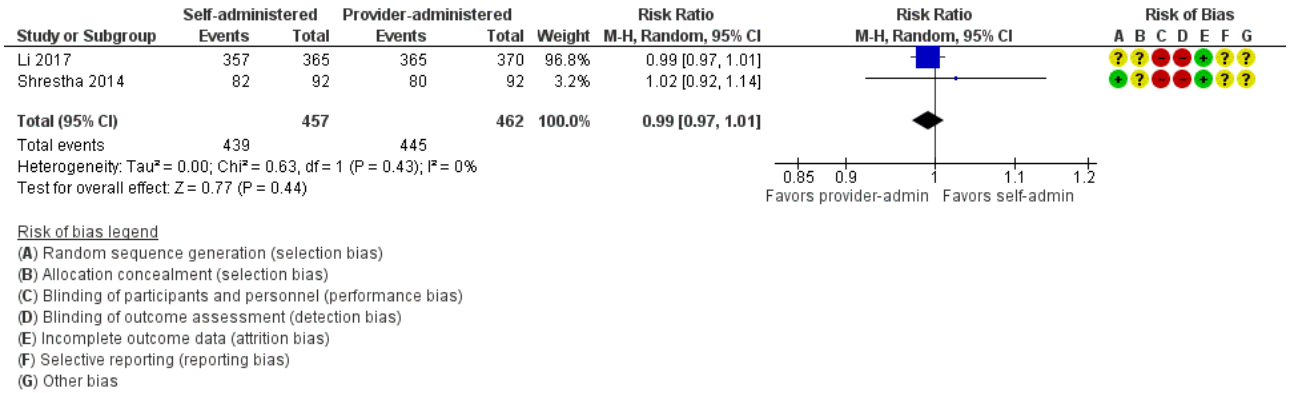
### Excluded studies

We excluded 22 studies at the full-text screening stage because they did not compare outcomes by self-administered versus provider-administered medical abortion, the study participants did not meet our eligibility criteria, or they were ongoing studies. See Characteristics of excluded studies tables.

## Risk of bias in included studies

Individual risks of bias for the two RCTs (Li 2017; Shrestha 2014) can be found in the Characteristics of included studies section and Figure 2. Individual risks of bias for the 16 NRSs can be found combined in Table 4 and by each study:

**Figure 2. Forest plot and risk of bias: success of medical abortion - RCTs**




| Study ID | Table |
|---|---|
| Akin 2004 | Table 6 |
| Alam 2013 | Table 7 |
| Alam 2018 | Table 8 |
| Bracken 2006 | Table 9 |
| Bracken 2010 | Table 10 |
| Dagousset 2004 | Table 11 |
| Elul 2001 - Tunisia | Table 12 |
| Elul 2001 - Vietnam | Table 13 |
| Hajri 2004 | Table 14 |
| Iyengar 2016 | Table 15 |
| Karki 2009 | Table 16 |
| Ngoc 2004 | Table 17 |
| Okonufua 2014 | Table 18 |

| | |
|---|---|
| Provansal 2009 | Table 19 |
| Raghavan 2012 | Table 20 |
| Shuchita 2008 | Table 21 |

### Main effects analysis

#### *Risk of bias for randomized controlled trials*

We identified two RCTs (Li 2017; Shrestha 2014), which we assessed for risks of bias using the Cochrane 'Risk of bias' tool for RCTs (Higgins 2017) and by key outcomes reported in Summary of findings for the main comparison: 1) successful abortion; and 2) ongoing pregnancy. One study (Shrestha 2014) reported zero ongoing pregnancies for both the self-administered (0/92) and provider-administered groups (0/92), and we therefore did not include the data in our meta-analysis because it could not be calculated in Review Manager 2014. We did not assess risks of bias by the third key outcome (any complication requiring surgical intervention) because neither study reported on that outcome.

For successful abortion, we classified both RCTs as having serious risk of bias because Li 2017 and Shrestha 2014 were at unclear risk. Li 2017 was at unclear risk of bias for this outcome because we classified three of the 'Risk of bias' domains as unclear (random sequence generation, allocation concealment, and selective outcome reporting), one domain (blinding of outcome assessor) at high risk, and two at low risk (blinding of personnel and participants, and incomplete outcome data). We rated Shrestha 2014 as being at unclear risk of bias for this outcome because three domains were at low risk (random sequence generation, blinding of personnel and participants, and incomplete outcome data), two were at unclear risk (allocation concealment and selective outcome reporting), and one was at high risk (blinding of outcome assessor).

For ongoing pregnancy, we classified Li 2017 and Shrestha 2014 as having serious risks of bias because they were at unclear risk. Li 2017 was at unclear risk of bias for this outcome because we classified three of the 'Risk of bias' domains as unclear (random sequence generation, allocation concealment, and selective outcome reporting), one domain (blinding of outcome assessor) at high risk, and two at low risk (blinding of personnel and participants, and incomplete outcome data). We rated Shrestha 2014 as being at unclear risk of bias for this outcome because three domains were at low risk (random sequence generation, blinding of personnel and participants, and incomplete outcome data), two were at unclear risk (allocation concealment and selective outcome reporting), and one was at high risk (blinding of outcome assessor).

We present comprehensive 'Risk of bias' assessments for the RCTs included in the main effects analysis in the 'Risk of bias assessments (RCTs): All outcomes' table; Table 3.

### Allocation

#### *Random sequence generation (selection bias)*

We categorized Li 2017 at unclear risk of bias and Shrestha 2014 at low risk of bias. Li 2017 was at unclear risk of bias because the study authors did not describe the method used to generate allocation sequence; the authors only state that participants were allocated randomly to the two groups. Shrestha 2014 was at low risk of bias because the computer-generated randomization sequencing described in the study should produce comparable groups.

#### *Allocation (selection bias)*

Both RCTs were at unclear risk of bias, because Li 2017 and Shrestha 2014 described enrolled participants being allocated randomly to two groups, but did not provide further details on the method used to conceal the allocation sequence. There was therefore insufficient detail to determine whether interventions could have been foreseen in advance of or during enrolment.

### Blinding

#### *Blinding (performance bias and detection bias)*

We rated both studies at low risk of performance bias and at high risk of detection bias.

#### *Performance bias*

Study authors did not explain the methods used to address blinding for participants or personnel from knowledge of which intervention a participant received. However, due to the medical abortion protocols it was impossible to blind participants and personnel in these studies, and we therefore judged these studies to be at low risk of performance bias. Participants were aware of which intervention they received, because if they were in the intervention group they were told to go home and administered misoprostol on their own; if they were in the comparison group (provider-administered) they were told to return to the clinic or hospital to receive misoprostol. It was unlikely that personnel were blinded to treatment allocation, because the protocols for the intervention and comparison groups differed, and healthcare providers therefore instructed women to follow separate medical abortion protocols unique to their group allocation.

#### *Detection bias*

Study authors did not explain the methods used to address blinding of the outcome assessors from knowledge of which intervention a participant had received. In Li 2017, the study authors did not describe whether the outcome assessment was blinded. In Shrestha 2014, study authors did not describe who the outcome assessors were, but we believed that the outcome assessors were aware of which intervention a participant received.

### Incomplete outcome data

We rated both studies at low risk of bias for both outcomes due to complete descriptions of attrition and exclusion numbers in each intervention group; however, the study authors did not describe the reasons for attrition.

### Selective reporting

We judged both studies to be at unclear risk of reporting bias, because the study authors did not examine the possibility of outcome reporting and what was found. There is therefore insufficient information to assess whether there is an important risk of reporting bias. Authors mention both statistically significant as well as statistically non-significant differences.

### Other potential sources of bias

#### *Risk of bias for NRSs*

We identified 16 NRSs, which we assessed using the ROBINS-I tool for each key outcome reported in Summary of findings 2: 1) successful abortion; 2) ongoing pregnancy; and 3) any complications requiring surgical intervention (Sterne 2016). All studies reported on the success of medical abortion. Eleven studies (Akin 2004; Alam 2018; Bracken 2006; Bracken 2010; Dagousset 2004; Hajri 2004; Iyengar 2016; Karki 2009; Ngoc 2004; Provansal 2009; Shuchita 2008) reported on ongoing pregnancy; however, we did not include the data for one study (Alam 2013) in the primary analysis because we could not calculate them, given missing data for the total number of women who reported on the outcome in each group. Five studies (Alam 2013; Alam 2018; Dagousset 2004; Provansal 2009; Raghavan 2012) reported on any complication requiring surgical intervention; however, two of these (Alam 2013; Raghavan 2012) could not be included in the meta-analysis, due to a lack of data on the number of women who reported on the outcome in each group. We rated all studies as having a serious risk of bias for each outcome assessed because we judged at least two domains for each outcome to be at serious risk of bias. We present comprehensive 'Risk of bias' assessments for NRSs included in the main effects analysis in the 'Risk of bias assessments (NRS): All outcomes' table; Table 4.

##### Confounding

We rated one study (Ngoc 2004) at moderate risk for confounding because the study authors described a regression using univariable analysis that did not find an association linking success to gestational age. We judged the remaining 15 NRSs as being at serious risk of bias because the authors did not describe what type of analysis was used to control for gestational age, a known confounder (Kahn 2000), and the study authors did not report whether they controlled for any confounders.

##### Allocation (selection bias: bias in selection of participants into the study)

We categorized 16 studies as being at moderate risk of selection bias, because the participants were not randomized.

##### Bias in classification of interventions

We judged all studies to be at low risk of bias, as the drug doses and the person administering mifepristone and misoprostol were well-defined. It was impossible to blind the participants and personnel to treatment allocation, due to the medical abortion protocol.

##### Bias due to deviations from intended studies

We categorized all studies except Alam 2018 to be at low risk of bias for this domain, because the studies did not report deviations from intended interventions other than what would be expected in normal practice. We rated Alam 2018 at moderate risk of bias, because three women sought additional care at another facility and we do not know if these women were from the self- or provider-administered group. Although this is a deviation from the protocol, the impact on the intervention is likely to be minimal, given that only 2.1% of women sought this additional care.

##### Bias due to missing data (attrition bias)

Bias due to missing data varied by study. The predicted direction of bias due to missing per protocol data is towards self-administered medical abortion, while the predicted direction of bias due to missing ITT data is towards the null.

We judged three studies to be at low risk of bias because the ITT data were reasonably complete (Akin 2004; Dagousset 2004; Shuchita 2008). We rated 12 studies (Alam 2013; Alam 2018; Bracken 2006; Bracken 2010; Elul 2001 - Tunisia; Elul 2001 - Vietnam; Hajri 2004; Iyengar 2016; Karki 2009; Ngoc 2004; Okonufua 2014; Raghavan 2012) at moderate risk of bias, because they reported reasonably complete per protocol data. We judged Provansal 2009 to be at serious risk of bias, because per protocol outcome data were not available for more than 20% of the participants.

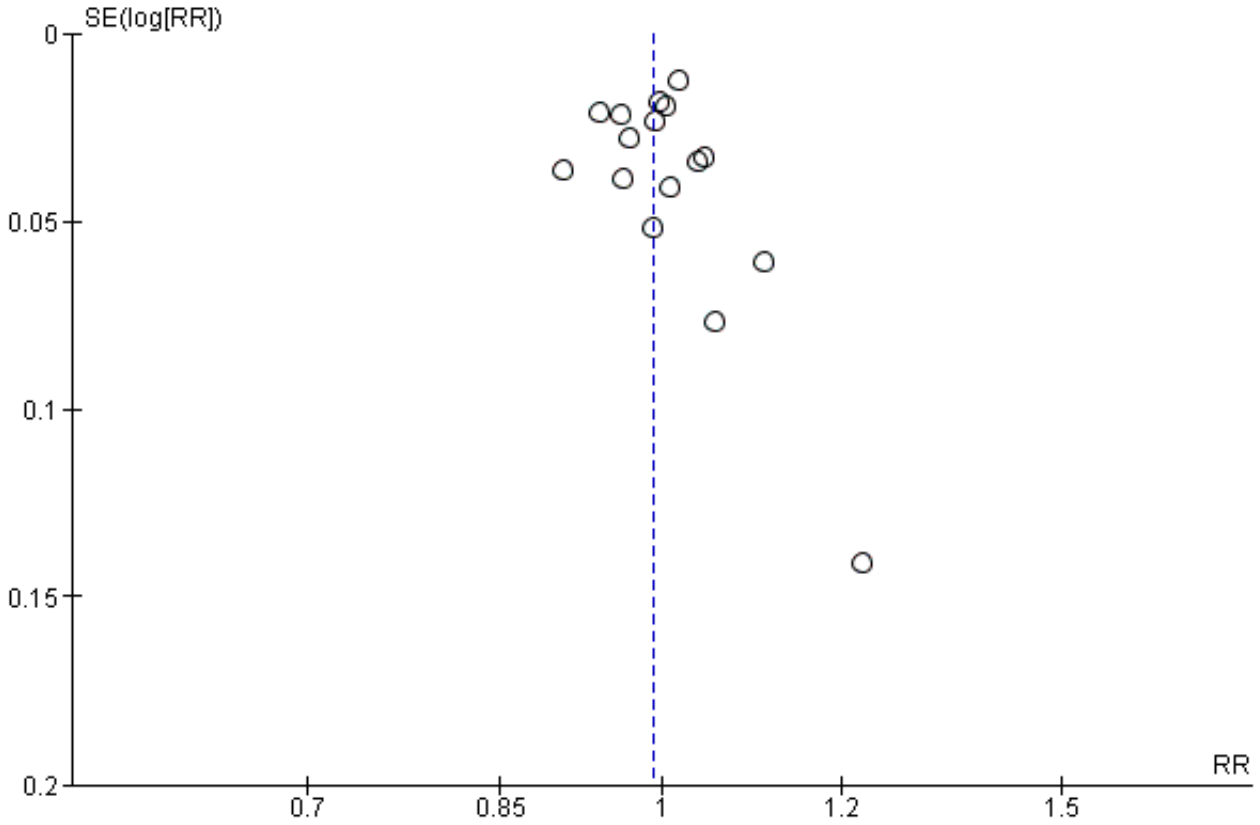
##### Blinding in measurement of outcomes

We rated all 16 (Akin 2004; Alam 2013; Alam 2018; Bracken 2006; Bracken 2010; Dagousset 2004; Elul 2001 - Tunisia; Elul 2001 - Vietnam; Hajri 2004; Iyengar 2016; Karki 2009; Ngoc 2004; Okonufua 2014; Provansal 2009; Raghavan 2012; Shuchita 2008) studies at serious risk of bias due to lack of blinding by the outcome assessors, because the outcomes were assessed by healthcare providers who were aware of the intervention.

##### Bias in the selection of reported result (reporting bias)

We rated all studies at moderate risk of reporting bias, because study authors did not demonstrate, by means of a pre-registered protocol or a statistical analysis plan, that all reported results corresponded to all intended outcomes, analyses, and sub-cohorts. Further, the asymmetrical funnel plot for (Analysis 2.1) displays small-study effects which may be due to publication bias (Figure 3).

**Figure 3. Funnel plot: success of medical abortion -NRS**




## Effects of interventions

See: **Summary of findings for the main comparison** Self-administered medical abortion compared to provider-administered medical abortion for women of reproductive age seeking induced abortion (RCTs); **Summary of findings 2** Self-administered medical abortion compared to provider-administered medical abortion for women of reproductive age seeking induced abortion (NRS)

Our main effects analysis included two RCTs and 16 NRSs.

### Successful abortion

We included two RCTs and 16 NRSs that compared the effect of self-administered and provider-administered medical abortion on successful abortion among women seeking to terminate a pregnancy.

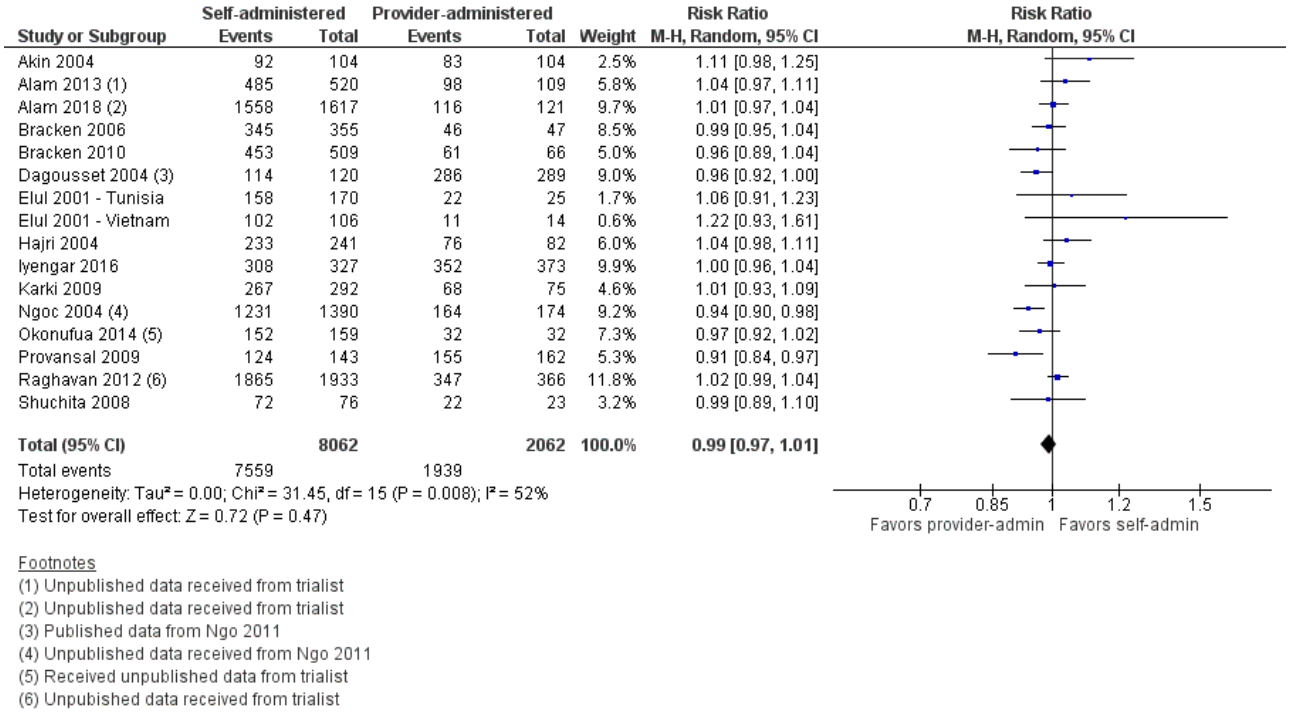
#### *RCTs*

Two RCTs of 919 women (Li 2017; Shrestha 2014) found that there is no difference between provider-administered and self-administered medical abortion in the likelihood of having a successful abortion (risk ratio (RR) 0.99, 95% confidence interval (CI) 0.97 to 1.01; moderate certainty of evidence; Analysis 1.1; Figure 2). The evidence suggests that the chance of having a successful abortion with self-administration is between 93% and 97%, while the chance of having a successful abortion with provider-administration is 96%. Of the women who underwent self-administered medical abortion (n = 457), 96.06% (439/457) had a successful abortion compared to 96.32% (446/462) of women in the provider-administered group (n = 462). In Li 2017, the overall successful abortion rate across both groups was 98.23% (722/735) compared to 88.04% (162/184) in Shrestha 2014.

#### *NRSs*

Across 16 prospective cohort studies of 10,124 women, it is uncertain whether there is any difference in successful abortion between provider-administered compared to self-administered medical abortion, because the certainty of this evidence is very low (RR 0.99, 95% CI 0.97 to 1.01; Analysis 2.1; Figure 4). The evidence suggests that if the chance of having a successful abortion with provider-administration is 94% (1939/2062), the chance of having a successful abortion with self-administration is between 91% and 95%. Successful abortions ranged from 86.71% (124/143) (Provansal 2009) to 97.18% (345/355) (Bracken 2006) in the self-administered group, and from 78.57% (11/14) (Elul 2001 - Vietnam) to 100% (32/32) (Okonufua 2014) in the provider-administered group.

**Figure 4. Forest plot: success of medical abortion - NRS**




Footnotes
(1) Unpublished data received from trialist
(2) Unpublished data received from trialist
(3) Published data from Ngo 2011
(4) Unpublished data received from Ngo 2011
(5) Received unpublished data from trialist
(6) Unpubished data received from trialist

**Explaining heterogeneity in the intended effect of interventions on successful abortion in NRSs**

We performed meta-analysis on 16 NRSs with dichotomous prescribing outcomes (Analysis 2.1). For our meta-analysis on successful abortion, we did not detect serious heterogeneity.

Based on an $I^2$ of 52%, there was likely moderate heterogeneity (Higgins 2017). The confidence intervals overlapped, suggesting that the variation between studies was probably what we would expect by chance, indicating low heterogeneity. $Chi^2$ = 31.45, and was therefore larger than the degrees of freedom (15), which also indicates heterogeneity. There was also a statistically significant measure of heterogeneity (P = 0.008). Variation in the size of the treatment effect was small, indicating low to moderate heterogeneity. Overall, these measures would indicate moderate heterogeneity (Higgins 2011).

In summary, the certainty level of the evidence ranged from very low (NRSs) to moderate (RCTs) for the rate of successful abortion among women in the self-administered group compared to those in the provider-administered group (Summary of findings 2). We are certain of the evidence from the RCTs, with further research very unlikely to change our confidence in the estimate of effect (RR 0.99, 95% CI 0.97 to 1.01). The certainty level of the evidence from the RCTs is moderate because we downgraded the trials across the 'Risk of bias' GRADE domain. We detected serious risks of bias among the NRSs, so we downgraded the certainty of the evidence by one level. Given that the NRSs start at a baseline of low certainty of evidence (Ryan 2016), we had very low confidence that the estimate of effect for successful abortion (RR 0.99, 95% CI 0.97 to 1.01) was precise. However, the overall level of certainty of the evidence for the pooled effect estimate was moderate. Given that the effect estimates and the 95% CIs were the same for the two RCTs and the NRSs, we are confident in the pooled effect estimate (RR 0.99, 95% CI 0.97 to 1.01) and that the rate of successful abortion was comparable among women in the self-administered group and those in the provider-administered group.

### Ongoing pregnancy

One RCT (Li 2017) and 11 NRSs compared the effect on ongoing pregnancy, a secondary measure of effectiveness, of self-administered and provider-administered medical abortion among women seeking early termination.

#### *RCTs*

For ongoing pregnancy, Li 2017 showed that there is probably little or no difference between self-administered versus provider-administered medical abortion groups (RR 1.69, 95% CI 0.41 to 7.02; 1 study, 735 women; low certainty of evidence). The evidence suggests that the chance of ongoing pregnancy with self-administration is 1.4% (5/365), while the chance of ongoing pregnancy with provider-administration is 0.8% (3/370). Ongoing pregnancy occurred in 1.09% (8/735) of women overall; 1.37% (5/365) in the self-administered group and 0.81% (3/370) in the provider-administered group. We could not include Shrestha 2014 in this analysis because the data could not be analyzed in Revman, given that there were zero ongoing pregnancies for both groups (n = 184).

**Explaining heterogeneity in the intended effect of interventions for ongoing pregnancy in RCTs**

We did not perform a meta-analysis of the RCTs for ongoing pregnancy, since data for only one RCT (Li 2017) could be calculated in Review Manager 2014.

***NRSs***

For ongoing pregnancy, it is uncertain whether there is a difference between the self-administered and provider-administered medical abortion groups because the certainty of this evidence is very low. Eleven NRSs showed no difference in the occurrence of ongoing pregnancies among women in the self-administered group compared to women in the provider-administered group (RR 1.28, 95% CI 0.65 to 2.49; 11 studies, 6691 women; Analysis 3.1; Figure 5; Figure 6; very low certainty of evidence). The evidence suggests the chance of ongoing pregnancy with self-administered medical abortion is 1.7% (86/5174), and the chance of ongoing pregnancy with provider-administered medical abortion is 0.8% (12/1517). Five studies (Alam 2013; Elul 2001 - Tunisia; Elul 2001 - Vietnam; Okonufua 2014; Raghavan 2012) were not included in this analysis because of missing or incomplete data.

**Figure 5. Forest plot: ongoing pregnancy**

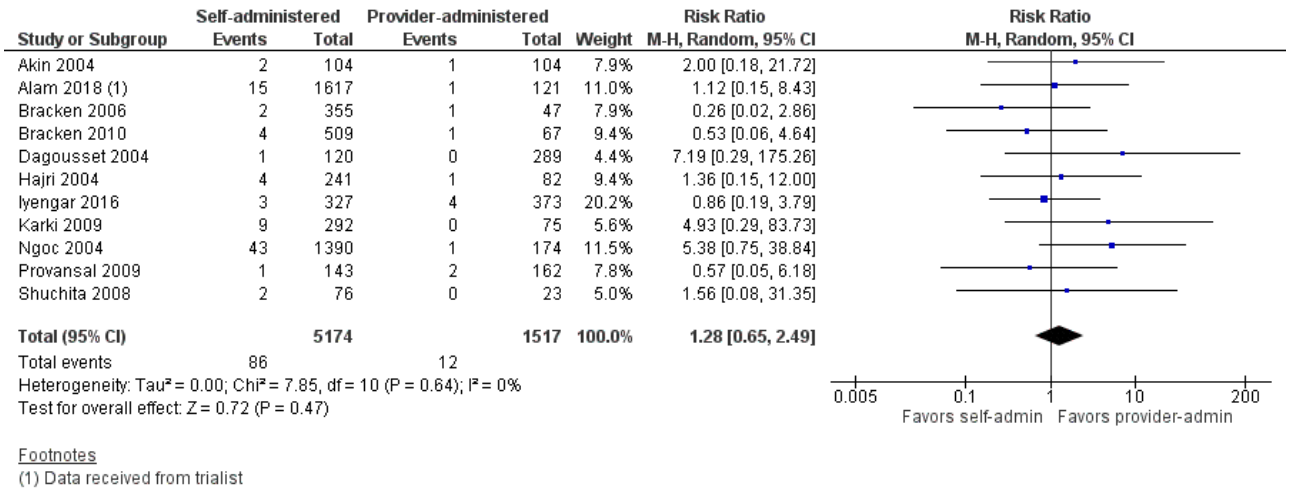
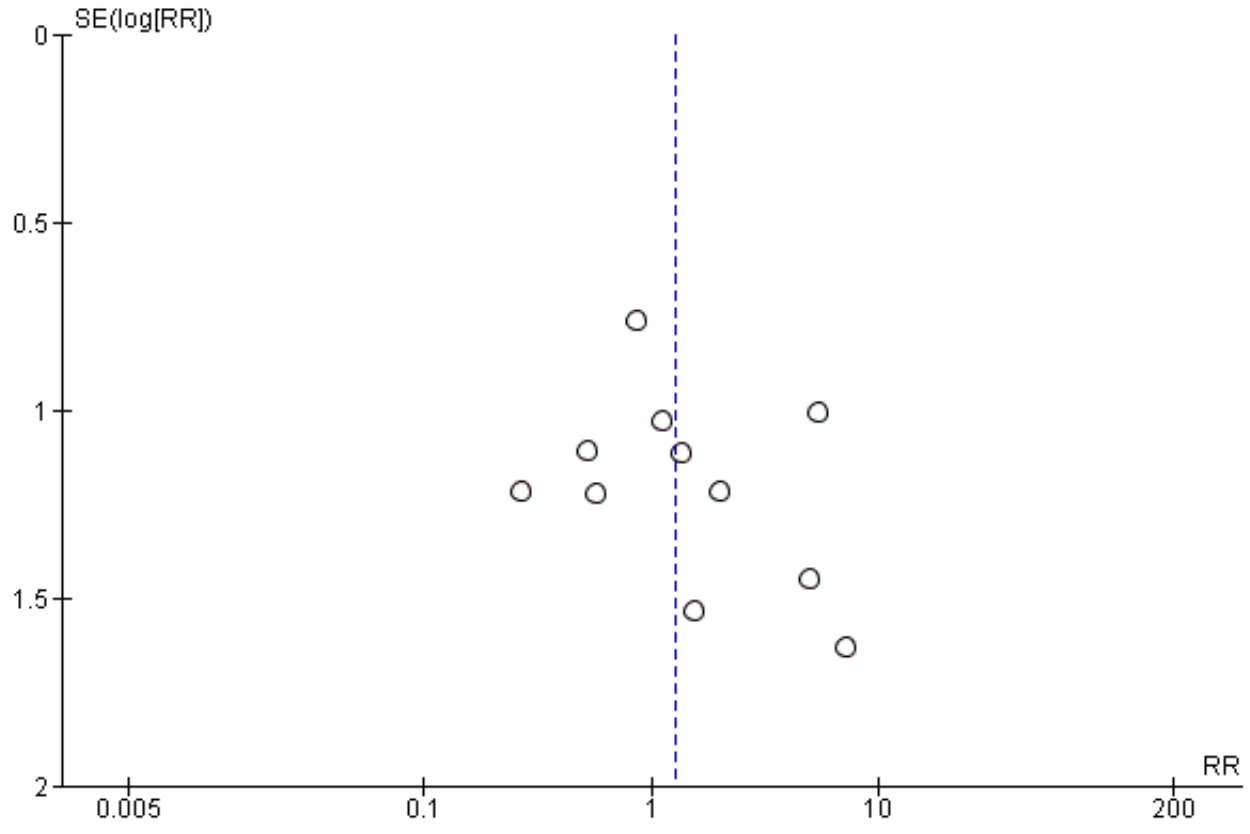



**Figure 6. Funnel plot: ongoing pregnancy**



#### Explaining heterogeneity in the intended effect of interventions in NRS

We performed meta-analysis on 11 NRSs with dichotomous prescribing outcomes (Analysis 3.1). For the meta-analysis of ongoing pregnancy, we categorized the heterogeneity as not serious. Given an $I^2$ = 0%, heterogeneity was unlikely to be important (Deeks 2017); zero per cent of the observed variance between studies is due to real differences in the effect size, while 100% of the observed variance would be expected to be based on random error. The CIs overlap, suggesting that the variation between studies was likely what we would expect by chance, indicating low heterogeneity. $Chi^2$ = 7.85 and was therefore smaller than the degrees of freedom (10), which indicates that heterogeneity was unlikely. There was no statistically significant heterogeneity, as P = 0.64, i.e. higher than P < 0.10. Variation in the size of the treatment effect was large, indicating high heterogeneity. However, overall heterogeneity was unlikely to be important.

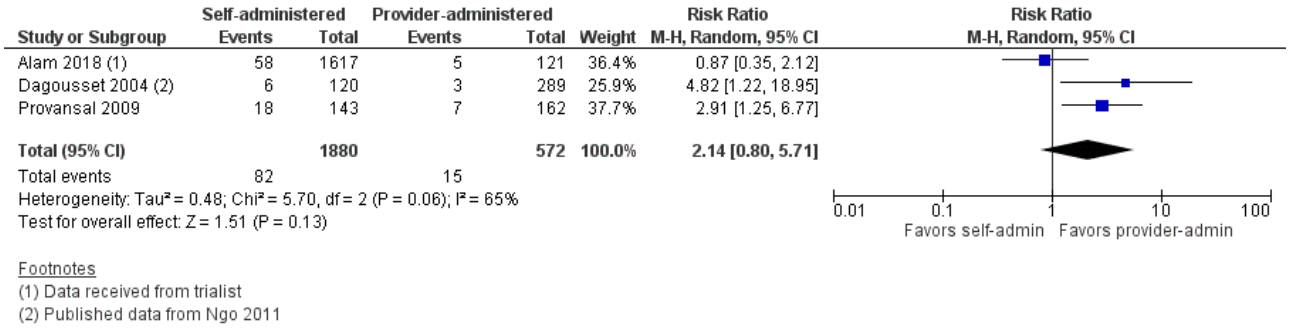
In summary, the level of certainty that the rate of ongoing pregnancy was comparable between women in the self-administered group versus those to the provider-administered group ranged from very low to low, because the certainty of the evidence for ongoing pregnancy was low for the RCT (Li 2017) and very low for the 11 NRSs, given the serious risk of bias detected in all studies (Summary of findings for the main comparison; Summary of findings 2). We have low confidence in the evidence for the RCT, so that further research is likely to change our confidence in the effect estimate (RR 1.69, 95% CI 0.41 to 7.02; 1 study, 735 women). We found serious risks of bias among the NRSs and the RCT, so we downgraded the certainty of the evidence by one level, but since that NRSs started at a baseline rating of low, the overall level of certainty for this outcome was very low (Ryan 2016). It is likely that the effect estimate for ongoing pregnancy among NRSs (RR 1.28, 95% CI 0.65 to 2.49; 11 studies, 6691 women; Analysis 3.1) was not precise. Overall, we have limited confidence in the effect estimate for the one RCT (RR 1.69, 95% CI 0.41 to 7.02), or that the rate of ongoing pregnancy was comparable for women in the self-administered group compared to those in the provider-administered group.

#### Any complication requiring surgical intervention

The two included RCTs did not report on any complication requiring surgical intervention. Three NRSs (Alam 2018; Dagousset 2004; Provansal 2009), covering 2452 women, were included in the meta-analysis that compared the effect of any complication requiring surgical intervention between self-administered and provider-administered groups. Two NRSs (Alam 2013; Raghavan 2012) were not included in the analysis, due to incomplete data on the total participants in the self-administered and provider-administered groups (see Table 1 for details).

For any complication requiring surgical intervention, it is unclear whether there is a difference between self-administered and provider-administered medical abortion, because the certainty of the evidence is very low (RR 2.14, 95% CI 0.80 to 5.71; 3 studies, 2452 women; Analysis 4.1; Figure 7; very low certainty of evidence). The evidence suggests the chance of having any complication requiring surgical intervention with self-administered medical abortion is 4.4% (82/1880); and the chance of any complication requiring surgical intervention with provider-administered medical abortion is 2.6% (15/572).

**Figure 7. Forest plot: any complications**




#### *Explaining heterogeneity in the intended effect of interventions in NRSs for any complication requiring surgical intervention*

We did not examine measures to explain heterogeneity in the meta-analysis, since we included only three NRSs with dichotomous prescribing outcomes on any complications requiring surgical intervention (Deeks 2017).

In summary, the level of certainty of the evidence for no difference in the rate of any complications requiring surgical intervention, a measure of safety, between self-administered and provider-administered groups was low for the NRSs (See Summary of findings 2 for main comparison). The RCTs included in the review did not report on this outcome, and therefore we did not assess the certainty of evidence from RCTs. For the three NRSs that reported on any complication requiring surgical intervention, we detected a serious risk of bias, so we downgraded the certainty of evidence by one level. The effect estimate (RR 0.96, 95% CI 0.91 to 1.02; 3 studies, 2452 women) was not precise.

### *Secondary analyses*

#### Complications

Serious complications were rare. In reporting on complications of medical abortion, the included studies covered: hemorrhage (2 studies, 1005 women; Analysis 5.1; Iyengar 2016; Provansal 2009); infection (1 study, 305 women; Analysis 5.2; Provansal 2009); and any complication requiring surgical hospitalization (2 studies, 2147 women; Analysis 5.3; Alam 2018; Dagousset 2004). No

studies reported on hematoma or on complications resulting from advanced pregnancies.

#### Hemorrhage

In each study, only one woman in each group had a hemorrhage. Among the women who self-administered medical abortion (n = 470), the average rate of having a hemorrhage was 0.43% (2/470), compared to 0.37% (2/535) of women in the provider-administered group (n = 535). The meta-analysis showed no evidence of a statistically significant difference in the RR of having a hemorrhage between the two groups (RR 1.14, 95% CI 0.16 to 8.03; $I^2$ = 0%; 2 studies, 1005 women; Analysis 5.1).

#### Infection

Infection was reported in one study (Provansal 2009). Two of the 162 women in the provider group had an infection, while no women in the self-administered group had an infection (n = 143). The average rate of having an infection was 0.01% (2/162) among women in the provider-administered group compared to 0% (0/143) of women in the self-administered group (n = 143). The analysis showed no statistically significant difference in the risk of having an infection between the two groups (risk difference (RD) −0.01, 95% CI −0.03 to 0.01; 1 study, 305 women; Analysis 5.2).

#### Any complication requiring hospitalization

A total of three complications requiring hospitalization were reported among the self-administration group (n = 1737) in two studies (Alam 2018; Dagousset 2004). The average rate of requiring hospitalization due to any complication was 0.17% (3/1737) among women in the self-administered group compared to 0% (0/410) of women in the provider-administered group (n = 410). The analysis showed no statistically significant risk of having any complication requiring hospitalization between the two groups (RR 1.58, 95% CI 0.08 to 29.81; $I^2$ = 44%; 2 studies, 2147 women; Analysis 5.3).

#### Incomplete medical abortion

Incomplete medical abortions were also rare. Twelve studies with 7645 women (Akin 2004; Alam 2013; Alam 2018; Bracken 2006; Bracken 2010; Hajri 2004; Iyengar 2016; Karki 2009; Li 2017; Ngoc 2004; Provansal 2009; Shuchita 2008) reported on incomplete medical abortions; however, Dagousset 2004 did not report on this outcome for provider-administered groups, so we have not included this study in the meta-analysis. A total of 208 (3.5%) incomplete medical abortions were reported among the self-administered group (n = 5939), compared to 56 incomplete medical abortions among the provider-administered group (3.28%; n = 1706). The analysis showed no statistically significant difference in the risk of having an incomplete medical abortion between the two groups (RR 1.12, 95% CI 0.81 to 1.55; $I^2$ = 1%; 12 studies, 7645 women; Analysis 6.1).

#### Side effects

Side effects were reported inconsistently across studies, either as dichotomous or as continuous measures. We did not produce meta-analyses of continuous measures because an insufficient number of studies reported on these outcomes to produce a meaningful measure. Studies reported on the following side effects: nausea, heavy bleeding, vomiting, pain/cramps, fever/chills, and diarrhea.

#### Nausea

Nausea was reported as a dichotomous measure in seven studies with 3874 women (Alam 2013; Alam 2018; Bracken 2006; Li 2017; Okonufua 2014; Shrestha 2014; Shuchita 2008). The average observed events of nausea was 52.58% (1631/3102) among women in the self-administered group (n = 3102; range 5.41% to 70.43%), compared to 33.55% (259/772) in the provider-administered group (n = 772; range 16.30% to 71.07%). Pooled analysis showed no difference in nausea incidence between the two groups (RR 0.85, 95% CI 0.71 to 1.02; 7 studies, 3874 women; Analysis 7.1). One study (Akin 2004) reported nausea as a continuous measure in 306 women. Women in the self-administered group (n = 279) reported nausea lasting for an average of 2 days ± 2.8 compared to an average of 1.8 days ± 2 in the provider-administered group (n = 27).

#### Heavy bleeding

Heavy bleeding was reported as a dichotomous measure in five studies with 3272 women (Alam 2013; Alam 2018; Iyengar 2016; Okonufua 2014; Shuchita 2008). The average observed events of heavy bleeding was 21.99% (584/2656) among women in the self-administered group (n = 2656; range 0.19% to 86.36%), compared to 20.94% (129/616) in the provider-administered group (n = 616; range 0% to 90%). Pooled analysis showed no difference in events of heavy bleeding between the two groups (RR 1.04, 95% CI 0.91 to 1.20; 5 studies, 3272 women; Analysis 7.2). Three studies (Akin 2004; Bracken 2006; Ngoc 2004) reported heavy bleeding as a continuous measure in 2058 women. Women in the self-administered group reported heavy bleeding lasting for an average of 2.17 days ± 2.02 (n = 1761; range 1.9 ± 1.74 to 2.5) compared to an average of 2.03 days ± 2.24 (n = 297; range 1.7 ± 2.5 to 2.4) in the provider-administered group. Ngoc 2004 did not report standard deviations for this measure.

#### Vomiting

Vomiting was reported as a dichotomous measure in six studies with 3568 women (Alam 2013; Alam 2018; Li 2017; Okonufua 2014; Shrestha 2014; Shuchita 2008). The average observed rate of vomiting was 24.62% (695/2823) among women in the self-administered group (n = 2823; range: 3.84% to 45.33%) compared to 12.35% (92/745) in the provider-administered group (n = 745; range: 4.32% to 43.48%). Pooled analysis showed no difference in the occurrence of vomiting between the two groups (RR 1.09, 95% CI 0.89 to 1.34; 6 studies, 3568 women; Analysis 7.3). Three studies (Akin 2004; Bracken 2006; Ngoc 2004) reported vomiting as a continuous measure in 2340 women. Women in the self-administered group reported vomiting lasting for an average of 0.70 days ± 1.6 (n = 1761; range: 0.6 to 0.8 ± 2) compared to an average of 0.43 days ± 1.05 (n = 297; range: 0.2 to 0.7 ± 1.09) in the provider-administered group. Ngoc 2004 did not report standard deviations for this measure.

#### Pain/cramps

Pain/cramps were reported as a dichotomous measure in four studies with 1640 women (Iyengar 2016; Li 2017; Okonufua 2014; Shuchita 2008). The average observed rate of pain/cramps was 38.46% (340/884) among women in the self-administered group (n = 884; range 5.86% to 69.33%), compared to 31.48% (238/756) in the provider-administered group (n = 756; range 4.20% to 69.57%). Pooled analysis showed no difference in the occurrence of pain/cramps between the two groups (RR 0.96, 95% CI 0.86 to 1.08; 4 studies, 1640 women; Analysis 7.4). Four studies (Akin 2004;

Bracken 2006; Ngoc 2004; Shrestha 2014) reported pain/cramps as a continuous measure in 2242 women. Women in the self-administered group reported pain/cramps lasting for an average of 1.83 days ± 2.00 (n = 1853; range 0.6 ± 1.21 to 2.9 ± 3.1), compared to an average of 1.63 days ± 2.14 (n = 389; range 0.5 ± 1.22 to 2.01 ± 1.8) in the provider-administered group. Ngoc 2004 did not report standard deviations for this measure.

#### Fever/chills

Fever/chills were reported as a dichotomous measure in four studies with 2643 women (Alam 2018; Iyengar 2016; Okonufua 2014; Shuchita 2008). The average observed rate of fever/chills was 37.59% (803/2136) among women in the self-administered group (n = 2136; range 7.59% to 45.70%), compared to 15.98% (81/507) in the provider-administered group (n = 507; range 6.31% to 43.80%). Pooled analysis showed no difference between the occurrence of fever/chills between the two groups (RR 1.08, 95% CI 0.89 to 1.31; 4 studies, 2643 women; Analysis 7.5). Three studies (Akin 2004; Bracken 2006; Ngoc 2004) reported fever/chills as a continuous measure in 2058 women. Women in the self-administered group reported fever/chills lasting for an average of 0.57 days ± 1.59 (n = 1761; range 0.3 ± 0.77 to 1 ± 2.4), compared to an average of 0.37 days ± 0.72 (n = 297; range 0.3 ± 0.7 to 0.3 ± 0.73) in the provider-administered group. Ngoc 2004 did not report standard deviations for this measure.

#### Diarrhea

Diarrhea was reported as a dichotomous measure in four studies with 3286 women (Alam 2013; Alam 2018; Li 2017; Shrestha 2014). The average observed rate of diarrhea was 13.72% (356/2594) among women in the self-administered group (n = 2594; range 4.11% to 22.88%), compared to 8.96% (62/692) in the provider-administered group (n = 692; range 4.32% to 28.44%). Pooled analysis showed no difference in the occurrence of diarrhea between the two groups (RR 0.96, 95% CI 0.72 to 1.29; 4 studies, 3286 women; Analysis 7.6). No studies reported on diarrhea in continuous measures.

### *Acceptability of medical abortion*

In reporting acceptability, most of the included studies used the following criteria: satisfaction with the medical abortion method (13 studies, 7582 women: Alam 2013; Alam 2018; Bracken 2010; Dagousset 2004; Hajri 2004; Iyengar 2016; Karki 2009; Li 2017; Ngoc 2004; Okonufua 2014; Provansal 2009; Shrestha 2014; Shuchita 2008); the likelihood of choosing the medical method again (6 studies, 3515 women: Alam 2018; Dagousset 2004; Iyengar 2016; Karki 2009; Okonufua 2014; Provansal 2009); and the likelihood of recommending the medical abortion method to a friend (6 studies, 3513 women: Alam 2018; Dagousset 2004; Iyengar 2016; Karki 2009; Okonufua 2014; Provansal 2009).

#### Satisfaction (satisfied or highly) with the medical abortion method

Of the women who self-administered medical abortion (n = 5715), the average level of being satisfied or highly satisfied was 91.2% (5212/5715), compared to 90.95% (1698/1867) of women in the provider-administered group (n = 1867). The meta-analysis showed no difference in the level of satisfaction of the procedure between the two groups (RD 0.01, 95% CI −0.03 to 0.05; $I^2$ = 90%; 13 studies, 7582 women; Analysis 8.1).

#### Likelihood of choosing the medical abortion method again

Of the women who self-administered medical abortion (n = 2560), the average likelihood that they would choose the medical abortion method again was 83.48% (2137/2560), compared to 53.61% (512/955) of women in the provider-administered group (n = 955). The meta-analysis showed no evidence of a difference in the probability of choosing the medical abortion method again between the two groups (RD 0.02, 95% CI −0.04 to 0.09; $I^2$ = 83%; 6 studies, 3515 women; Analysis 8.2).

#### Likelihood of recommending the medical abortion method to a friend

Of the women who self-administered medical abortion (n = 2558), the average likelihood that they would recommended the medical procedure to a friend for a future abortion was 87.22% (2231/2558), compared to 52.67% (503/955) of women in the provider-administered group (n = 955). The meta-analysis showed no evidence of a difference in the probability of recommending the medical abortion procedure to a friend between the two groups (RD 0.06, 95% CI −0.04 to 0.15; $I^2$ = 94%; 6 studies, 3513 women; Analysis 8.3). Two studies (Alam 2013; Hajri 2004) reporting this outcome could not be include in the meta-analysis, because they did not provide denominators (see Table 1).

### *Subsidiary analyses*

#### Compliance with medical abortion protocol

In reporting compliance with the medical abortion protocol, most of the included studies used the following criteria: perfect use of the medical abortion method (3 studies, 2937 women; Alam 2013; Alam 2018; Bracken 2010); did not complete medical abortion protocol (4 studies, 2164 women; Bracken 2010; Iyengar 2016; Li 2017; Shuchita 2008); misoprostol not taken on time (4 studies, 2608 women; Alam 2013; Alam 2018; Elul 2001 - Vietnam; Shuchita 2008); and did not return to confirm abortion status (3 studies, 2988 women; Alam 2013; Alam 2018; Bracken 2010).

#### Perfect use of medical abortion method

Of the women who self-administered medical abortion (n = 2687), the average proportion of women who perfectly used the medical abortion regimen was 98.33% (2642/2687), compared to 98.00% (295/301) of women in the provider-administered group (n = 301). The meta-analysis showed no difference in the percentage of women perfectly using the medical abortion regimen between the two groups (RD −0.00, 95% CI −0.02 to 0.02; $I^2$ = 42%; 3 studies, 2988 women; Analysis 9.1).

#### Did not complete protocol

Of the women who self-administered medical abortion (n = 1311), the average proportion of women who did not complete the medical abortion protocol was 0.92% (12/1311), compared to 1.9% (17/853) of women in the provider-administered group (n = 853). The meta-analysis showed no difference in the percentage of women not completing the medical abortion protocol between the two groups (RD −0.01, 95% CI −0.03 to 0.02; $I^2$ = 77%; 4 studies, 2164 women; Analysis 9.2). Two studies (Alam 2013; Dagousset 2004) reporting this outcome could not be include in the meta-analysis, because they did not provide denominators (see Table 1).

#### Misoprostol not taken on time

Of the women who self-administered medical abortion (n = 2339), the proportion who did not take misoprostol on time was 1.11% (26/2339), compared to 1.86% (5/269) of women in the provider-administered group (n = 269). The meta-analysis showed no difference in the percentage of women not taking misoprostol on time between the two groups (RD −0.00, 95% CI −0.03 to 0.02; $I^2$ = 25%; 4 studies, 2608 women; Analysis 9.3). One study (Elul 2001 - Tunisia) reported this outcome, but we could not include it in the meta-analysis because data for the provider-administered group were not available (Table 1).

#### Did not return to confirm abortion status

Of the women who self-administered medical abortion (n = 2687), the average proportion of women who did not return to the clinic to confirm their abortion status was 1.53% (41/2687), compared to 2.99% (9/301) of women in the provider-administered group (n = 301). The meta-analysis showed no difference in the percentage of women who did not return to the clinic to confirm their abortion status between the two groups (RD −0.01, 95% CI −0.04 to 0.03; $I^2$ = 63%; 3 studies, 2988 women; Analysis 9.4). One study (Dagousset 2004) reported this outcome, but we could not include it in the meta-analysis because data for the provider-administered group were not available (Table 1).

#### Contact with health services

In reporting contact with health services, most of the included studies used the following criteria: proportion of women who called the clinic or a hotline (6 studies, 5277 women; Alam 2013; Alam 2018; Elul 2001 - Vietnam; Karki 2009; Ngoc 2004; Okonufua 2014), and the percentage of women who underwent unscheduled clinic visits (6 studies, 5774 women; Alam 2013; Alam 2018; Iyengar 2016; Karki 2009; Ngoc 2004; Okonufua 2014).

#### Called clinic or hotline

Of the women who self-administered medical abortion (n = 4226), the average proportion of women who called the clinic or hotline during the medical abortion protocol was 22.74% (961/4226), compared to 11.70% (123/1051) of women in the provider-administered group (n = 1051). The meta-analysis showed no difference in the proportion of women calling the clinic or a hotline between the two groups (RD 1.35, 95% CI 0.65 to 2.81; $I^2$ = 92%; 6 studies; 5277 women; Analysis 10.1). Two studies (Dagousset 2004; Provansal 2009) reporting this outcome could not be included in the meta-analysis because data for the provider-administered groups were not available (Table 1).

#### Unscheduled clinic visits

Of the women who self-administered medical abortion (n = 4408), the average proportion of women who completed an unscheduled clinic visit during the medical abortion protocol was 8.39% (370/4408), compared to 8.27% (113/1366) of women in the provider-administered group (n = 1366). The meta-analysis showed no difference in the percentage of women who completed an unscheduled clinic visit between the two groups (RD −0.01, 95% CI −0.04 to 0.03; $I^2$ = 75%; 6 studies, 5774 women; Analysis 10.2). One study (Provansal 2009) reported this outcome, but we could not include it in the meta-analysis because data for the provider-administered group were not available (Table 1).

#### Best and worst features of medical abortion

In reporting the best and worst features of the medical abortion method, most studies used similar categories to capture these participant-reported data. In order to consolidate available data for this subsidiary outcome, we used the most commonly reported criteria for the best and worst features, respectively, and where appropriate we combined criteria agreed to be synonymous between review authors. Using one included study (Shuchita 2008) as an example, for best features, 'easy, simple, and quick' was collapsed into 'easy and quick'; 'less painful' was collapsed into 'perceived less pain'; 'privacy' was collapsed into 'secret, more confidential'; 'no surgery' was collapsed into 'method is non-invasive'; 'no hospitalization' was collapsed into 'stay at home, avoid the clinic'; and, for worst features, 'uncertainty' was collapsed into 'fear, anxiety'; 'none/no reason given' was collapsed into 'none'; and 'pain' was collapsed into 'pain and cramps.' In all included studies, participants could select multiple best and worst features. See Table 22; Table 23.

In reporting best features of the medical abortion process, most of the included studies used the following criteria: easy and quick (6 studies, 4684 women; Alam 2013; Alam 2018; Bracken 2006; Hajri 2004; Ngoc 2004; Shuchita 2008); perceived less pain (6 studies, 4684 women; Alam 2013; Alam 2018; Bracken 2006; Hajri 2004; Ngoc 2004; Shuchita 2008); perceived as safer, healthier (3 studies, 2219 women; Bracken 2010; Hajri 2004; Ngoc 2004); secret, more confidential (6 studies, 4684 women; Alam 2013; Alam 2018; Bracken 2006; Hajri 2004; Ngoc 2004; Shuchita 2008); less anxiety, fewer worries (2 studies, 1921 women; Bracken 2006; Ngoc 2004); method is non-invasive (5 studies, 3139 women; Alam 2013; Alam 2018; Bracken 2006; Hajri 2004; Shuchita 2008); stay at home, avoid the clinic (2 studies, 1836 women; Alam 2018; Shuchita 2008); more natural, similar to menstruation (1 study, 298 women; Hajri 2004); none, or no best features (4 studies, 4288 women; Alam 2013; Alam 2018; Bracken 2006; Ngoc 2004). One study (Akin 2004 reported this outcome, but group data were not available for the selected best features so we have not included overall data (Table 1). One study (Ngoc 2004) only reported overall data.

In reporting worst features of the medical abortion process, most of the included studies used the following criteria: fear, anxiety (5 studies, 4418 women; Alam 2013; Alam 2018; Bracken 2006; Ngoc 2004; Shuchita 2008); none, no reason given (6 studies, 4716 women; Alam 2013; Alam 2018; Bracken 2006; Hajri 2004; Ngoc 2004; Shuchita 2008); bleeding (6 studies, 4716 women; Alam 2013; Alam 2018; Bracken 2006; Hajri 2004; Ngoc 2004; Shuchita 2008); pain and cramps (6 studies, 4716 women; Alam 2013; Alam 2018; Bracken 2006; Hajri 2004; Ngoc 2004; Shuchita 2008); fatigue (2 studies, 1953 women; Bracken 2006; Ngoc 2004); procedure takes too long/too many visits (2 studies, 2183 women; Alam 2013; Ngoc 2004); waiting for completion (2 studies, 2036 women; Alam 2018; Hajri 2004). Two studies (Akin 2004; Bracken 2006) reported this outcome, but group data were not available for the selected worst features so we have not included overall data (Table 1). One study (Ngoc 2004) only reported overall data.

#### Best features of medical abortion - overall

Overall, among women in both the self-administered and provider-administered groups: 52.05% (2438/4684) reported 'easy and quick' as a best feature; 19.04% (892/4684) reported 'perceived less pain' as a best feature; 16.04% (356/2219) reported 'perceived as safer, healthier' as a best feature; 13.47% (631/4684) reported

'secret, more confidential' as a best feature; 5.15% (99/1921) reported 'less anxiety, fewer worries' as a best feature; 47.82% (1501/3139) reported 'method is non-invasive' as a best feature; 17.92% (329/1836) reported 'stay at home, avoid the clinic' as a best feature; 8.72% (26/298) reported 'more natural, similar to menstruation' as a best feature; and 4.99% (214/4288) reported no best feature. See Table 22.

#### Worst features of medical abortion - overall

Overall, among women in the self-administered and provider-administered groups: 12.22% (540/4418) reported 'fear, anxiety' as a worst feature; 23.66% (1116/4716) reported 'none, no reason given' as a worst feature; 32.15% (1516/4716) reported 'bleeding' as a worst feature; 40.33% (1902/4716) reported 'pain and cramps' as a worst feature; 12.14% (237/1953) reported 'fatigue' as a worst feature; 7.83% (171/2183) reported 'procedure takes too long/too many visits' as a worst feature; and 4.03% (82/2036) reported 'waiting for completion' as a worst feature. See Table 23.

## DISCUSSION

Home-based medical abortion has previously been shown to be safe, effective, and acceptable to women seeking early termination (Ngo 2011), which can provide women with convenience and choice. While self-administration of medical abortion has further potential to expand access to safe abortion for unintended pregnancies (Kapp 2017) and to alleviate burdens on health systems where trained healthcare providers are limited, it has remained unclear whether medical abortion procedures that are self-administered by the women are as safe, effective, and acceptable as those that are provider-administered. In this review, we have assessed the evidence base on women's role in administering their own medical abortions by comparing the effectiveness, safety, and acceptability of self-administered medical abortion versus provider-administered medical abortion in any setting.

### Summary of main results

See Summary of findings for the main comparison and Summary of findings 2 for the main comparisons.

Eighteen studies conducted in 10 countries (Albania, Bangladesh, China, France, India, Nepal, Nigeria, Tunisia, Turkey, Vietnam) from both low-to-middle-resource and high-resource settings met the inclusion criteria for our main effects analysis. We included two RCTs with 919 women and 16 NRSs with 10,124 women. Overall, self-administered and provider-administered groups were comparable at baseline. However, six studies reported statistically significant differences between the groups at baseline on characteristics including age, education level, primigravida status, gestational age, and gravidity. The mean age of women included in the studies ranged from 24.3 years to 32.2 years. The maximum gestational age was less than nine weeks for 13 studies, and nine weeks for the remaining five studies. Two studies did not compare participant characteristics at baseline.

We summarize our main conclusions on the comparison of self-administered versus provider-administered medical abortion for the following three main outcomes: successful abortion, ongoing pregnancy, and complications requiring surgical intervention.

#### Successful abortion

Evidence from two RCTs for the primary outcome, successful abortion (primary outcome indicating effectiveness), combined with evidence from 16 NRSs, demonstrates that there were no statistically significant differences in the evidence on the effectiveness of medical abortion between self-administered and provider-administered groups among women of reproductive age (15 to 49 years) seeking termination of early pregnancy. However, the inclusion of NRSs in the analysis may compromise the certainty of the evidence.

#### Ongoing pregnancy

Evidence from one RCT and 11 NRSs on ongoing pregnancy, a secondary outcome indicating effectiveness, showed that there were no statistically significant differences in the effectiveness of medical abortion between self-administered and provider-administered groups. The inclusion of NRSs in our analysis may compromise the certainty of the evidence.

#### Any complications requiring surgical intervention

We found no RCT evidence for this outcome, since neither RCT reported it. We are very uncertain about this outcome, due to the heterogeneous and imprecise results of the meta-analysis of the three NRSs which covered it.

### Overall completeness and applicability of evidence

Eighteen studies met the inclusion criteria to assess our primary objective. These included two RCTs with 919 women and 16 NRS with 10,124 women across 10 countries, 16 low-to-middle-resource settings (Akin 2004; Alam 2013; Alam 2018; Bracken 2006; Bracken 2010; Elul 2001 - Tunisia; Elul 2001 - Vietnam; Hajri 2004; Iyengar 2016; Li 2017; Karki 2009; Ngoc 2004; Okonufua 2014; Raghavan 2012; Shrestha 2014; Shuchita 2008), and two high-resource settings (Dagousset 2004; Provansal 2009). We did not find eligible studies from Latin America, where unsafe abortion and the use of medical abortion have been reported (Ganatra 2017; Olavarrieta 2015).

This review included studies comparing self-administration to provider-administration of early medical abortion; the maximum gestational age ranged from 35 days or less (Li 2017) to 63 days or less (Alam 2013; Alam 2018; Iyengar 2016; Okonufua 2014; Shrestha 2014). Gestational ages above nine weeks are therefore not represented in this review. The intervention in all included studies involved the administration of a combined mifepristone-misoprostol regimen. Mifepristone was administered in a clinic under healthcare-provider supervision, followed by at least one dose of misoprostol administered by women either in the clinic (under healthcare-provider supervision) or at home. We found two studies (Louie 2014; Tsereteli 2016) that involved both clinic and home administration of mifepristone and misoprostol, but disaggregated data by groups of interest were not available from the study authors. We found no studies of a self-administered misoprostol-only regimen. At least one stage of the regimen was supervised by a provider in all included studies, so this review could not assess the complete self- versus provider-administration of the entire mifepristone-misoprostol protocol.

Contributing to the evidence base on where early medical abortion could take place (home versus clinic medical abortion by Ngo 2011), this review includes eight additional studies (Alam 2013;

Alam 2018; Iyengar 2016; Li 2017; Okonufua 2014; Raghavan 2012; Shrestha 2014; Shuchita 2008) that specifically examined the role of women in administering part of the early medical abortion protocol without the supervision of a healthcare provider. Eighteen studies (11,043 women) assessed the primary outcome of successful abortion; 11 studies (6691 women) assessed the secondary outcome of ongoing pregnancy; 12 studies (7645 women) assessed the secondary outcome of incomplete abortion; and three studies (2452 women) assessed the outcome of any complications requiring surgical intervention. Successful abortion was consistently and ubiquitously defined across studies as complete evacuation of the uterus, without recourse to surgical evacuation.

The pooled effect estimates from the 18 studies in this review showed no evidence of a difference in the effectiveness of early medical abortion between provider-administered and self-administered groups. The 18 studies included women seeking termination services across both low-to-middle- and high-resource settings, suggesting that women can self-administer part of the mifepristone-misoprostol medical abortion protocol effectively.

Overall, complications were rare. Only two studies (Dagousset 2004; Provansal 2009) showed statistically significant findings for the risk of having any complication requiring surgical intervention, which was higher in the self-administered medical abortion group compared to the provider-administered group. However, the pooled estimate showed no evidence of a difference in complications between the two groups. Side effects were more common, especially among the self-administered group, but the difference between the two groups was not statistically significant.

Overall, most women were satisfied or highly satisfied with the medical abortion method they received. Women who self-administered were more satisfied or highly satisfied and more likely to choose their medical abortion procedure again compared to those who underwent the provider-administered procedure, although the findings were not statistically significant. Furthermore, compliance with the medical abortion protocol was higher among women who self-administered, allaying a main concern about self-administration. These studies showed that women who self-administered took the drugs on time and correctly and were more likely to return to the clinic to confirm their abortion status compared to those in the provider-administered group.

### Quality of the evidence

The overall level of certainty of the evidence was moderate that there were no differences in the rates of successful abortion and ongoing pregnancy among women in the self-administered group compared to those in the provider-administered group. The level of certainty of the evidence was very low that there was no difference in the rate of any complications requiring surgical intervention between self-administered versus provider-administered groups. See Summary of findings for the main comparison; Summary of findings 2.

We included 16 NRSs and two RCTs in this review (11,043 women). Study protocols are much more likely to allow women to select self-administered or provider-administered medical abortion procedures rather than to randomly assign women to groups; confounding because of non-randomization is therefore a methodological limitation of this review. The certainty level in the evidence ranged from very low (NRSs) to moderate (RCTs) for the rate of successful medical abortion among women in the self-administered group compared to those in the provider-administered group. However, the overall level of certainty of the evidence for the pooled effect estimate was moderate. We are therefore confident that the rate of successful abortion was comparable among women in the self-administered group and those in the provider-administered group.

The level of certainty ranged from very low (RCTs) to low (NRSs) that the rate of ongoing pregnancy was comparable between women in the self-administered group versus those in the provider-administered group. Overall, we have limited confidence in the effect estimate for the one RCT and that the rate of ongoing pregnancy was comparable for women in the self-administered group compared to those in the provider-administered group.

The level of certainty of the evidence was very low for the NRSs that there was no difference in the rate of any complications requiring surgical intervention between self-administered versus provider-administered groups.

Finally, our review showed no difference in women's level of satisfaction between self-administered and provider-administered groups. We did not assess the certainty of the evidence for acceptability.

Overall, we are confident in the evidence that the rates of successful abortion, ongoing pregnancy, and acceptability were comparable among women in the self-administered and provider-administered groups, and we therefore reject the null hypothesis that provider-administered medical abortion is more effective than self-administered medical abortion among women of reproductive age (14 to 59 years) seeking an abortion.

### Potential biases in the review process

Given that most of the pooled data were from NRSs to assess the primary objective of this review, results are inherently prone to selection bias. Compared to RCTs, NRS results could have been affected by the existence and attention to women's choice of self-administered or provider-administered medical abortion; however, the overall results show no differences between the success of medical abortion between the two groups. All studies used at least one standard method (e.g. last menstrual period) to ascertain pregnancy, although methods varied across study settings. Similarly, all studies assessed the outcome of medical abortion using at least a clinical examination, but again methods varied across sites, and two studies (Elul 2001 - Tunisia; Elul 2001 - Vietnam) did not provide any detail on how abortion status was determined at follow-up visits. Although it could have been done, no studies blinded outcome assessors, placing all studies at either high (RCTs) or serious (NRS) risk of bias. Only one study (Ngoc 2004) reported controlling for confounding of important factors (e.g. gestational age) to ascertain comparability of groups for analysis. We excluded four eligible studies (Akin 2009; Blum 2004; Louie 2014; Tsereteli 2016) because they did not disaggregate data by self-administered and provider-administered groups, meaning that we were unable to obtain and include all relevant data in our review. To assess the primary outcome of successful abortion, the trialists of four studies provided unpublished data (Alam 2013; Alam 2018; Okonufua 2014; Raghavan 2012); review authors relied on the quality of study data received. Only one study

(Shrestha 2014) reported success rates according to the provision of additional doses of misoprostol, although comparisons of efficacy across doses, as well as a systematic approach to calculating success (e.g. binomial proportions versus survival analysis) remain a gap in the literature (Suec 2015). While our search strategy was comprehensive, we only included published randomized and prospective cohort studies. Many organizations have access to unpublished service data on outcomes reported in this review. The inclusion of such data in a meta-analysis may yield more precise findings.

### Agreements and disagreements with other studies or reviews

This review is the first to systematically assess the evidence base on the role of women administering their own medical abortion procedures. We build on the evidence from a prior systematic review on home-based medical abortion (Ngo 2011) and extend the research objective to a comparison of the administrator of the procedure rather than simply location. Just as home-based medical abortion was found to be comparable to a clinic-based procedure in terms of effectiveness, safety, and acceptability, this review found self-administration of medical abortion to be as effective, safe, and acceptable as provider administration. However, we are very uncertain of the evidence for safety. This review supports the literature that women prefer to self-administer abortions, based on convenience, privacy, and access to support (Kero 2009; Lokeland 2014; Ngo 2011; Platais 2016; Raymond 2013; Shrestha 2018; Song 2018; Tan 2018; WHO 2014).

Some studies have suggested that self-administered medical abortion is associated with higher failure rates (Bhalla 2018; Giri 2015; Provansal 2009), although failures are more likely to be a result of misuse of abortifacients or of deviation from the protocol rather than a consequence of self-administration. A large proportion (98.33%) of women in the self-administered group in this review had high adherence to the medical abortion protocol. The inclusion of a low-sensitivity pregnancy test as a component of self-assessment may decrease the likelihood of complications and the need for clinic follow-up (Iyengar 2016; Shrestha 2014). Providing women with a low-sensitivity pregnancy test as well as accurate and digestible information that complies with WHO-recommended guidelines should be a crucial aspect to preventing failure in either self-administered or provider-administered medical abortion.

## AUTHORS' CONCLUSIONS

### Implications for practice

We demonstrate that women may administer their medical abortion procedure effectively, although there is uncertainty about safety outcomes. We also demonstrate that self-administration is highly acceptable, with almost all women (91.2%) opting to self-administer again if they had a future abortion. Policy-makers should review international and national guidelines on medical abortion methods to consider whether to offer women at nine weeks gestation or less and with access to the support and information they want or need, the choice to return to the clinic for misoprostol or to take the drug at home. In this way, the number and cost of clinic visits for the woman would be reduced, and the strain on overburdened healthcare systems would be alleviated.

However, a shift toward medical methods for early abortion occurring outside a clinic setting and partially administered by women comes with a variety of health service delivery implications to prevent any health complications, albeit rare. First, there is a need to expand healthcare provider training in monitoring, supervision, and referral for medical abortion, particularly in low-resource settings, to ensure safe and standardized procedures. Second, a need exists for knowledge-sharing with women around correct and appropriate use of medical abortion regimens to increase their ability to obtain accurate and reliable information, and to increase their ability to self-assess before, during, and after the termination process. Healthcare providers must also receive adequate training to appropriately diagnose complications and prevent unnecessary surgical interventions. Given inequitable access to safe and effective abortion is a downstream consequence of inequitable access to contraceptives, post-abortion care regimens must emphasize family planning counseling and services to substantially reduce unintended pregnancies and pregnancy-related morbidity and mortality, including that from unsafe abortion (Darroch 2011; Langer 2015). Not only does self-administered medical abortion have the potential to improve access to safe abortion, it can potentially reduce the burden on health systems, especially in settings where there are inadequate number of trained healthcare providers.

### Implications for research

This review fills the evidence gap by demonstrating that women can effectively administer the second stage of their own abortions by self-administration of abortion drugs, and therefore may not require full supervision from a healthcare provider during this stage of the drug regimen. However, more research is required to determine whether self-administration is as safe as provider-administration. In the absence of medical supervision, research is needed to understand how best to inform and support women who choose to self-administer, including when to seek clinical care. To improve access and ease burdens on the health system, it is important to study which types of healthcare providers can be involved during the medical abortion process to ensure that the provision of the procedure is efficient and of high quality. Further research is needed to understand to what extent healthcare providers are trained according to the WHO guidelines on medical abortion procedures, and to what extent they are being implemented in practice.

Misoprostol is becoming ubiquitous across low-resource settings where abortion laws are restrictive. In many of these countries, surveys in pharmacies suggest that women are buying misoprostol to terminate pregnancies and that they are not receiving adequate information, high-quality drugs, or robust referrals (Footman 2018a; Footman 2018b; Ganle 2019). There is therefore a need to assess the self-administration of a misoprostol-alone regimen to understand its safety and effectiveness, along with operational research to understand how to train these outlets to dispense quality drugs and support women during the abortion process.

Other areas for future research include:

- Trials to test the effectiveness, safety, and acceptability of self-administered versus provider-administered medical abortion beyond the first trimester and among women and girls aged less than 18 years (Kapp 2017).

- Trials to test individual and health system costs of self-administered versus provider-administered medical abortion.
- Systematic review of the effectiveness, safety, and acceptability of abortion drugs delivered by pharmacists, telemedicine, and the internet compared to trained healthcare providers, which includes qualitative research methods for assessing acceptability.
- Health service delivery research to further assess how women would like to obtain abortion-inducing drugs and credible sources of information, as well as how they can best be reached for follow-up and reporting of outcomes, particularly the ruling-out of incomplete abortion or continuing pregnancy within an appropriate time frame (Kapp 2017).
- The characteristics of women who prefer self-administered to provider-administered medical abortion should be further explored, as these populations may have differing tendencies, including post-abortion contraception uptake (Kapp 2017).

Future trials must be rigorous in design and delivery, accounting for women's overwhelming preference to choose the location and method of their abortion procedures. Where possible, outcome assessors of abortion completion at follow-up should be blinded, to minimize detection bias in research methods.

## ACKNOWLEDGEMENTS

We acknowledge the contribution made by the Cochrane Support team, Cochrane Methods Group, Cochrane Copy Editing, and Cochrane Fertility and Regulation Group, with special thanks to Makalapua Motu'apuaka in the work carried out for this review.

We thank our colleagues at Gynuity Health Projects, including Tara Shochet, Tatyana Lotarevich, Hillary Bracken, and Beverly Winikoff for providing disaggregated data and conducting analyses to generate the data in some instances.

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## CHARACTERISTICS OF STUDIES

### Characteristics of included studies *[ordered by study ID]*

**Akin 2004**

| | |
|---|---|
| Methods | Prospective cohort study<br>July 2000 to March 2001<br>Use of pilot group(s) for initial recruitment |
| Participants | N = 208; 104 self-administered vs. 104 provider-administered<br><br>Turkey. 5 sites: 3 urban hospitals (Ankara, Eskesehir and Izmir) and 1 government-sponsored Maternal Child Health/Family Planning center (Ankara)<br><br>Inclusion criteria: Intrauterine pregnancy up to 56 days gestation (by last menstrual period); no known allergies to mifepristone or misoprostol |
| Interventions | 200 mg mifepristone in clinic + 400 µg oral misoprostol 2 days later, either a) in clinic or b) at home + paracetamol or paracetamol+codeine Additional misoprostol not offered |

**Akin 2004** *(Continued)*

| | |
|---|---|
| Outcomes | Successful abortion defined as complete abortions without recourse to surgical evacuation during study period<br><br>Incomplete abortion: any case requiring additional surgical intervention to complete uterine evacuation<br><br>Ongoing pregnancies: all cases with 2 weeks of clinically-estimated growth of gestational sac during study period<br><br>Side effects (diary cards)<br><br>Failures: classified into 4 categories as defined by Winikoff and colleagues |
| Funding | NR |
| Notes | Group data obtained from trialist (Bracken) |

**Alam 2013**

| | |
|---|---|
| Methods | Prospective cohort study<br>2 phases: July to October 2009, December 2009 to April 2010<br>Use of pilot group(s) for initial recruitment |
| Participants | N = 651; 540 self-administered vs. 111 provider-administered<br><br>Bangladesh. 10 facilities: 3 tertiary care facilities in Dhaka, and 7 nongovernmental sites in urban and peri-urban areas outside Dhaka city<br><br>Inclusion criteria: Women were eligible if they were 18 years or older; amenorrheic for up to 9 weeks on the day of mifepristone administration; in good health, with no contraindications to mifepristone or misoprostol; willing to provide a urine sample; and able and willing to provide a telephone number for the purposes of follow-up |
| Interventions | 200 mg mifepristone in clinic + 800 µg buccal misoprostol 2 days later either a) in clinic or b) at home, + two 500 mg paracetamol tablets if needed |
| Outcomes | Success of medical abortion as defined by evacuated uterus without surgical intervention<br><br>Secondary outcomes: Failure rate (overall): procedure failed and manual vacuum aspiration was required to complete the procedure; ongoing pregnancy: increase in uterine size consistent with an ongoing risk of pregnancy; incomplete: Incomplete emptying of the uterus |
| Funding | Research protocol and manuscript were funded by a grant from an anonymous donor to Gynuity Health Projects. Australian Agency for Inter- national Development; Government of the People's Republic of Bangladesh; Canadian International Development Agency; Embassy of the Kingdom of the Netherlands; Swedish International Development Cooperation Agency; and the Department for Inter- national Development, UK. "The Concept Foundation donated the mifepristone-misoprostol but did not contribute to the design or analysis of the study. Square Pharmaceuticals, Ltd. donated the analgesics to International Centre for Diarrhoeal Disease Research, Bangladesh for the study but did not contribute to the design or analysis of the study." |
| Notes | Includes data obtained from trialist (Bracken) |

**Alam 2018**

| | |
|---|---|
| Methods | Prospective cohort study |

**Alam 2018** *(Continued)*

| | |
|---|---|
| | November 2012 to June 2015<br>Use of pilot group(s) for initial recruitment |
| Participants | N = 1744; 1619 self-administered vs. 125 provider-administered<br><br>Bangladesh. 24 government health facilities<br><br>Inclusion criteria: Women age 18 years or older, up to 9 weeks of amenorrhea on the day of mifepristone administration (calculated by standard methods for menstrual regulation including a bimanual examination and the date of last menstruation), good health, no contraindications to mifepristone or misoprostol, and able and willing to provide a telephone number for follow-up purposes if necessary |
| Interventions | 200 mg mifepristone in clinic + 800 µg buccal misoprostol 1 day later either a) in clinic or b) at home, + mild analgesic (1 x 400 mg ibuprofen) |
| Outcomes | Succes of medical abortion: successful evacuation of the uterus without the need for a surgical intervention<br><br>Secondary outcomes: Failure rate (overall): failed MR. Ongoing pregnancy: Failed MR/ongoing pregnancy. Incomplete: debris in uterus |
| Funding | This research protocol was funded by a grant from an anonymous donor to Gynuity Health Projects. International Centre for Diarrhoeal Disease Research, Bangladesh is also grateful to the Governments of Bangladesh, Canada, Sweden, and the UK for providing unrestricted support. The Concept Foundation donated the mifepristone–misoprostol but did not contribute to the design or analysis of the study. |
| Notes | Includes data obtained from trialist (Bracken) |

**Bracken 2006**

| | |
|---|---|
| Methods | Prospective cohort study<br>October 2001 to May 2003<br>Use of pilot group(s) for initial recruitment |
| Participants | N = 409; 361 self-administered vs. 48 provider-administered<br><br>Albania. 2 tertiary-level government health facilities/hospitals (Tirana)<br><br>Inclusion criteria: Women seeking termination of intrauterine pregnancies were eligible if they had amenorrhea of 8 weeks or less based on clinical examination, menstrual history, and sometimes ultrasound; had no contraindications to the study drugs, were 18 years or older, lived or worked within 1 hour of the study site, agreed to provide an address and telephone number and to return for a follow-up visit |
| Interventions | 200 mg mifepristone in clinic + 400 µg oral misoprostol 2 days later either a) in clinic or b) at home, + 200 mg ibuprofen as needed |
| Outcomes | Success of medical abortion, defined as complete abortion without recourse to evacuation at any point during the study period<br><br>Secondary outcomes: Failure rate (overall): classified into 4 categories as defined by Winikoff. Ongoing pregnancy: a viable pregnancy assessed with either presence of a fetal heart beat on ultrasound or an increase in uterine size commensurate with 2 weeks of fetal growth since last visit. Incomplete: more than minimal products of conception in uterus that the provider believes will not be expelled spontaneously; and cases requiring an additional surgical intervention to complete the uterine evacuation |
| Funding | This research was supported by a grant from the Open Society Institute and an anonymous donor |

**Bracken 2006** *(Continued)*

| | |
|---|---|
| Notes | |

**Bracken 2010**

| | |
|---|---|
| Methods | Prospective cohort study<br>January 2007 to March 2008 |
| Participants | N = 599; vs. 69 self-administered vs. 530 provider-administered<br>India. 6 family planning clinics (in cities of New Delhi, Lucknow, Pune, Mumbai)<br>Inclusion criteria: Women with a final gestational age of ≤ 8 weeks on the day of mifepristone administration; good health, with no contraindications to mifepristone and misoprostol; and those willing to provide an address or telephone number for the purposes of follow-up |
| Interventions | 200 mg mifepristone in clinic + 400 µg oral misoprostol 2 days later either a) in clinic or b) at home, + 500 mg paracetamol and advised could obtain 330 mg paracetamol with 20 mg codeine if needed |
| Outcomes | Success of medical abortion: a complete expulsion, expulsion with remains (i.e. clots or decidua) that the provider believed could be expelled spontaneously, or abortion with products of conception in the vagina that could be removed with forceps. Ongoing pregnancy: a viable pregnancy assessed with either presence of a fetal heart beat on ultrasound or an increase in uterine size commensurate with 2 weeks of fetal growth since last visit. Incomplete: more than minimal products of conception in the uterus that the provider believed would not be expelled spontaneously |
| Funding | An anonymous donor provided financial support for this study |
| Notes | |

**Dagousset 2004**

| | |
|---|---|
| Methods | Prospective cohort study<br>January 2001 to February 2002 |
| Participants | N = 409; 120 self-administered vs. 289 provider-administered<br>France. 2 hospitals (Paris intra-muros and Paris suburbs)<br>Inclusion criteria for home abortion: wanting induced abortion with MA; no contraindications to MA; satisfied the mandatory legal requirements IVG in France; willingness to comply with the instructions and accept protocol; residing in a dwelling with a comfortable toilet and a telephone; living less than an hour from the drop-in center; being able to benefit from the presence of a trusted person for the first 3 hours after misoprostol is taken; informed of the progress of the investigation and gave written consent to participate |
| Interventions | 600 mg oral mifepristone in hospital + 400 µg oral misoprostol either in hospital or at home, + analgesic prescription. Additional oral misoprostol 400 µg was offered in clinic in case of non-expulsion within 3 hours after the first dose |
| Outcomes | Success of medical abortion, defined as uterine emptiness<br>Secondary outcomes: requiring surgical intervention; hospitalized in emergency; acceptability; and companionship |

**Dagousset 2004** *(Continued)*

| | |
|---|---|
| Funding | NR |
| Notes | Includes published data from Ngo 2011. Translated from French |

**Elul 2001 - Tunisia**

| | |
|---|---|
| Methods | Prospective cohort study<br>December 1997 to December 1998<br>Use of pilot group(s) for initial recruitment. |
| Participants | N = 195; 170 self-administered vs. 25 provider-administered<br>Tunisia. OB/GYN department of a large teaching hospital and nearby free-standing abortion clinic in Tunis<br>Inclusion criteria: Women presenting for termination of intrauterine pregnancy < 56 days last menstrual period |
| Interventions | 200 mg mifepristone in clinic + 400 µg oral misoprostol 48 hours later either a) at home or b) in clinic, + 500 mg paracetamol |
| Outcomes | Success of medical abortion defined as complete abortion<br>Secondary outcomes include: Failure rate (overall): failure of abortion classified as method or user-choice (due either to the provider or the women); Ongoing pregnancy at study end<br>Incomplete: Incomplete abortion at study end |
| Funding | This study was funded by the Bixby Foundation and the Population Council's Robert H Ebert Program on Critical Issues in Reproductive Health |
| Notes | Multi-country study (Vietnam and Tunisia). Includes published data from Ngo 2011 |

**Elul 2001 - Vietnam**

| | |
|---|---|
| Methods | Prospective cohort study<br>December 1997 to December 1998 |
| Participants | N = 120; 106 self-administered vs. 14 provider-administered<br>Vietnam. Single large maternity hospital in Ho Chi Minh City<br>Inclusion criteria: Women presenting for termination of intrauterine pregnancy < 56 days last menstrual period |
| Interventions | 200 mg mifepristone in clinic + 400 µg oral misoprostol 48 hours later either a) at home or b) in clinic, + 500 mg paracetamol |
| Outcomes | Success of medical abortion defined as complete abortion<br>Secondary outcomes include: failure rate (overall): failure of abortion classified as method or user-choice (due either to the provider or the women); Ongoing pregnancy at study end<br>Incomplete: Incomplete abortion at study end |

**Elul 2001 - Vietnam** *(Continued)*

| | |
|---|---|
| Funding | This study was funded by the Bixby Foundation and the Population Council's Robert H Ebert Program on Critical Issues in Reproductive Health |
| Notes | Multi-country study (Vietnam and Tunisia). Includes published data from Ngo 2011 |

**Hajri 2004**

| | |
|---|---|
| Methods | Prospective cohort study<br>November 2000 to July 2001<br><br>Use of pilot group(s) for initial recruitment |
| Participants | N = 334; 252 self-administered vs. 82 provider-administered<br><br>Tunisia: 4 sites: 2 hospitals (Tunis and Sousse) and 2 state-run family planning clinics (Tunis and Sfax)<br><br>Inclusion criteria: Women seeking termination with intrauterine pregnancy up to 56 days last menstrual period; lived or worked within reasonable distance of study site; in good general health; no contraindications to mifepristone or misoprostol; willing to return for follow-up |
| Interventions | 200 mg oral mifepristone in clinic + 400 µg oral misoprostol 2 days later either a) at home or b) in study clinic, + paracetamol or paracetamol with codeine |
| Outcomes | Success of medical abortion, defined as complete abortion without recourse to surgical intervention at any point for any reason during the study period<br><br>Secondary outcomes include side effects |
| Funding | This study was funded by the Fred H Bixby Foundation and an anonymous donor |
| Notes | |

**Iyengar 2016**

| | |
|---|---|
| Methods | Secondary analysis of an RCT, although allocation of place of misoprostol was not randomized<br><br>April 2013 to May 2014 |
| Participants | N = 731; 342 self-administered vs. 389 provider-administered<br><br>India. 6 primary care clinics (3 rural and 3 urban in state of Rajasthan)<br><br>Inclusion criteria: gestational age was 9 weeks or less (as determined by bimanual examination), resided in an area where follow-up was possible, and agreed to follow-up (home visit or phone call) |
| Interventions | 20 mg oral mifepristone in clinic + 400 µg misoprostol (route differed across clinics by their standard protocols - sublingual 55%; vaginal 17%; oral 28%); 2 days later either a) at home or b) in study clinic, + analgesics as needed. If bleeding did not start in 4 hours after miso, an additional dose of 400 µg of misoprostol |
| Outcomes | Success of medical abortion, defined as complete abortion without continuing pregnancy or the need for surgical intervention or additional mifepristone/misoprostol. Standardized questionnaires were used to record the outcome of abortion, side effects, experiences and acceptability. Efficacy was defined as complete abortion without continuing pregnancy or the need for surgical intervention or additional mifepristone/misoprostol. Safety was defined as absence of adverse events requiring hospital- |

**Iyengar 2016** *(Continued)*

| | |
|---|---|
| | ization, blood transfusion, intravenous fluids or intravenous antibiotics. Acceptability was assessed in terms of women's satisfaction with the procedure and their likelihood of choosing the same location for misoprostol administration in the event of a future abortion. Other outcomes were compliance with misoprostol, interim visits, time spent, side effects and companions present during home administration of misoprostol |
| Funding | Funding for this study was provided by the Swedish International Development Agency (SIDA) and Swedish Research Council (2011-3525). The funders had no role in conduct of the study, analysis or interpretation of the results |
| Notes | |

**Karki 2009**

| | |
|---|---|
| Methods | Prospective cohort study<br>April 2007 to February 2008<br>Use of pilot group(s) for initial recruitment. |
| Participants | N = 400; 323 self-administered vs. 77 provider-administered<br>Nepal. 4 sites: 2 tertiary teaching hospitals and 2 family planning clinics (3 sites in Kathmandu and 1 in Dharan)<br>Inclusion criteria: Women seeking termination with intrauterine pregnancy up to 56 days since last menstrual period; lived or worked within reasonable distance of study site; in good general health; no contraindications to mifepristone or misoprostol; willing to return for follow-up |
| Interventions | 200 mg oral mifepristone in clinic + 400 µg oral misoprostol 2 days later either a) at home or b) at the clinic, + 500 mg paracetamol |
| Outcomes | Success of medical abortion (not defined)<br>Secondary outcomes include: complications; side effects; acceptability; adherence; contact with health services |
| Funding | An anonymous donor provided financial support for this study |
| Notes | |

**Li 2017**

| | |
|---|---|
| Methods | Randomized controlled trial<br>February 2012 to May 2015 |
| Participants | N = 744; 372 self-administered vs. 372 provider administered<br>China. 5 sites: Institute of OB/GYN and 4 hospitals<br>Inclusion criteria: Women aged 15 to 45 years with normally regular menstrual cycles and 35 days of amenorrhea |
| Interventions | 75 mg oral mifepristone at the initial hospital visit followed by oral 400 mcg misoprostol 24 hours later either in the hospital or by self-administration |

**Li 2017** *(Continued)*

| | |
|---|---|
| Outcomes | Success of medical abortion defined as complete abortion without surgical intervention<br><br>Secondary outcomes include: side effects; satisfied or highly satisfied; and did not complete protocol |
| Funding | The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Support for this research was provided by the Start-Up Fund for Talents of the Third Affiliated Hospital of Guangzhou Medical University (2012); the Prevention and Control of Major Obstetric Disease major collaborative innovation project of the Educational Bureau of Guangzhou City (medical and health grant no. 13xt04, 2013); and the Collaborative Innovation Center for Prevention and Control of Major Obstetric Disease collaborative innovation platform of the educational and financial departments of Guangdong Province (regional development grant, 2014) |
| Notes | |

***Risk of bias***

| Bias | Authors' judgement | Support for judgement |
|---|---|---|
| Random sequence generation (selection bias) | Unclear risk | Quote: "Equal numbers of enrolled participants were allocated randomly to the hospital administration and self-administration groups." p 732<br><br>Comment: Although, the study authors did not describe the method used to generate allocation sequence, they state that participants were allocated randomly to the 2 groups |
| Allocation concealment (selection bias) | Unclear risk | Unclear risk of bias due to lack of detail about concealment of allocations prior to assignment |
| Blinding of participants and personnel (performance bias)<br>All outcomes | High risk | Quote: "For women in both groups, 2 follow-up appointments were scheduled in the 2 consecutive weeks after misoprostol administration. For the hospital administration group, follow-up visits to the hospital involved serum b-hCG detection and vaginal ultrasonic examination, and participants were observed for 6 hours after misoprostol administration." For the self-administration group, 2 telephone calls were scheduled for urine hCG self-detection and discomfort self-assessment follow-ups." "For both groups, final follow-up occurred after the completion of posttreatment menstruation. At this time, participants' daily logs and satisfaction questionnaires were collected and analyzed" p 733<br><br>Comment: Study authors did not explain methods to address blinding. Participants knew if they were undergoing self-administration or provider administration (e.g. blinded). Unlikely personnel were blinded by treatment allocation because protocols differed, and groups therefore received different attention |
| Blinding of outcome assessment (detection bias)<br>All outcomes | High risk | At follow-up/outcome assessment, participants' daily logs and satisfaction questionnaires were collected and analyzed, likely revealing treatment. p 733<br><br>Study authors do not describe whether outcome assessment was blinded |
| Incomplete outcome data (attrition bias)<br>All outcomes | Low risk | Quote: "A total of 744 participants (372 per group) were recruited for this study. After the exclusion of 2 participants in the hospital administration group who failed to return to the hospital for misoprostol administration and 7 participants in the self-administration group who were lost during follow-up, analyses included data from 370 participants in the hospital administration group and 365 in the self-administration group who completed follow-ups (Figure 1)". p 733 |

**Li 2017** *(Continued)*

| | | |
|---|---|---|
| | | Comment: Low risk of attrition bias due to complete description of number of attrition and excluded numbers in each intervention group. However, authors do not describe reasons for attrition |
| Selective reporting (reporting bias) | Unclear risk | No significant differences in age, length of menstrual cycle, history of pregnancy or delivery, duration of amenorrhea, serum b-hCG level, size of gestational sac or endometrial status (as detected by vaginal ultrasound), or percentage of discernibly expelled gestational sacs were observed between the groups<br><br>Low risk of reporting bias because authors state both statistically significant differences as well as no statistically significant differences, and outline may types of failures in addition to success |
| Other bias | Unclear risk | Quote "All participants were from a single city affiliated with our medical university. Future studies should be expanded to include participants from multiple centers in diverse cities and provinces or even involve national-level collaboration". P 737<br><br>Comment: Although there were no significant differences at baseline between hospital and self-groups of this study, it is unclear if these groups are representative of all women seeking induced abortion in the community. It is unclear how the selection of participants from/affiliated with only one site could introduce bias<br><br>Quote: "Three times as many participants autonomously chose to enroll in the self-administration group as those who chose hospital administration during the same period." p 734<br><br>Comment: Unclear how the option to autonomously choose group introduces selection bias into the study (how this interferes with randomization as a non-random approach to categorization) |

**Ngoc 2004**

| | |
|---|---|
| Methods | Prospective cohort, open-label study<br><br>January 2001 to December 2001<br><br>Use of pilot group(s) for initial recruitment |
| Participants | N = 1564; 1390 self-administered vs. 174 provider-administered<br><br>Vietnam. 8 sites: 1 peri-urban district hospital and 3 urban tertiary hospitals, and 4 urban, state-run maternal-child health family planning clinics<br><br>Inclusion criteria: All participants had intrauterine pregnancy < 56 days LMP, and had no known allergies to mifepristone or misoprostol. Women were expected to live or work within an hour of the study clinic and be willing to return for at least 1 follow-up visit |
| Interventions | 200 mg oral mifepristone in clinic followed by 400 mcg oral misoprostol 2 days later either in clinic or at home, + 8 x 500 mg paracetamol to take as needed |
| Outcomes | Success of medical abortion defined as complete abortion<br><br>Secondary outcomes include: surgical interventions; side effects; acceptability; worst/best features; companionship; did not complete protocol; contact with health services |
| Funding | NR |

**Ngoc 2004** *(Continued)*

| | |
|---|---|
| Notes | Includes published data from Ngo 2011 |

**Okonufua 2014**

| | |
|---|---|
| Methods | Prospective cohort study<br>May 2005 to October 2006 |
| Participants | N = 191; 159 self-administered vs. 32 provider-administered<br>Nigeria. 2 sites: Women's Health Research Centre in Benin City and Ahmadu Bello University Teaching Hospital in Zaria<br>Inclusion criteria: Living or working within a reasonable distance of the study site; gestational age of up to 63 days since LMP (determined by physical exam, menstrual history, and/or ultrasound), general good health, including absence of conditions contraindicating the use of mifepristone and misoprostol for pregnancy termination, and willingness to provide an address and/or telephone number for purposes of follow-up |
| Interventions | 200 mg oral mifepristone in clinic followed by 400 mcg oral misoprostol 2 days later either in clinic or at home, + 4 x 500 mg paracetamol to take as needed |
| Outcomes | Success of medical abortion (no definition beyond "method efficacy") |
| Funding | The study was funded by an anonymous donor. |
| Notes | Unpublished data obtained from trialist (Shochet) |

**Provansal 2009**

| | |
|---|---|
| Methods | Prospective cohort study<br>February 2008 to July 2008 |
| Participants | N = 305; 143 self-administered vs. 162 provider-administered<br>France. Center of Social Gynecology of the Hospital of Conception (Marseille)<br>Inclusion in home protocol: included all the patients who did a drug-related abortion as part of the network; request for abortion with the city gynecologist before 49 days of amenorrhea; patient who has met the legal requirements in IVG material in France; patient understanding the explanations and appearing to respect the rules; acceptance of the home method; patient living less than an hour from the hospital; patient with the opportunity to benefit from the presence of a trusted person for the first 3 hours after taking misoprostol; commitment to return for consultation 15 days after the initial visit |
| Interventions | 600 mg oral mifepristone in clinic followed by 400 mcg oral misoprostol 36 to 48 hours later either in clinic or at home |
| Outcomes | Success of medical abortion defined as effectiveness of procedure; expulsion<br>Secondary outcomes include: surgical interventions; complications; acceptability; any companion; contact with health services |
| Funding | NR |

**Provansal 2009** *(Continued)*

| | |
|---|---|
| Notes | Includes published data from Ngo 2011. Translated from French |

**Raghavan 2012**

| | |
|---|---|
| Methods | Prospective cohort study, operations research project<br>2006 to 2008 (2 phases) |
| Participants | N = 2400<br>Vietnam. 10 Vietnam Family Planning Association (VINAFPA) clinics: 2 sites in first phase (beginning 2006) and 8 sites in second phase (beginning 2007)<br>Inclusion criteria: Confirmed pregnancy; gestation of up to 56 days from LMP; and general good health, including absence of contraindications to using mifepristone and misoprostol for pregnancy termination. Participants also had to provide contact information for follow-up |
| Interventions | 200 mg mifepristone in clinic + 400 µg oral misoprostol 2 days later either a) in clinic or b) at home, + paracetamol or paracetamol plus codeine as needed |
| Outcomes | Success of medical abortion (not defined)<br>Secondary outcomes include: adverse effects and acceptability |
| Funding | The project was funded by an anonymous donor |
| Notes | Trialist (Shochet) provided success of medical abortion and failure outcome data by group |

**Shrestha 2014**

| | |
|---|---|
| Methods | Randomized controlled trial<br>April 2011 to August 2012 |
| Participants | N = 188; 94 self-administered vs. 94 provider-administered<br>Nepal. Department of OB/GYN, Chitwan Medical College teaching hospital<br>Inclusion criteria: Healthy women, more than 18 years, agreed to surgical termination if treatment failed |
| Interventions | 200 mg oral mifepristone in hospital followed by 800 mcg vaginal misoprostol 24 hours later either in hospital or at home, + 100 mg nimesulide (analgesic) at time of miso insertion |
| Outcomes | Medical abortion, defined as complete abortion (defined as passage of the products of conception without the need for surgical evacuation) Secondary outcomes include: side effects and satisfaction |
| Funding | NR |
| Notes | |

***Risk of bias***

| Bias | Authors' judgement | Support for judgement |
|---|---|---|

**Shrestha 2014** *(Continued)*

| | | |
|---|---|---|
| Random sequence generation (selection bias) | Low risk | Quote: "Eligible women were allocated randomly to two groups using a computer generated randomization sequence in blocks of variable size: Group A- received vaginal administration of misoprostol by trained hospital staff (the control group) and group B- self administration of vaginal misoprostol at home (the study group)." p 186<br><br>Comment: Low risk of bias (biased allocation to intervention) because computer-generated randomization sequencing should produce comparable groups. There is therefore low risk of bias |
| Allocation concealment (selection bias) | Unclear risk | Quote: "Eligible women were allocated randomly to two groups using a computer generated randomization sequence in blocks of variable size: Group A- received vaginal administration of misoprostol by trained hospital staff (the control group) and group B- self administration of vaginal misoprostol at home (the study group)." p 186<br><br>Comment: Details on the method used to conceal the allocation sequence are insufficient to determine whether interventions could have been foreseen in advance of or during enrolment<br><br>Details of allocation not provided beyond use of "computer generated randomization sequence in blocks of variable size" |
| Blinding of participants and personnel (performance bias)<br>All outcomes | High risk | Quote: "All women were given 200 mg mifepristone to take orally in the hospital. Women of the study group (i.e. home self administration of misoprostol) were given four tablets of 200 mcg misoprostol to insert vaginally at home 24 hours later after giving detail instructions. Women of the control group were asked to return after 24 hours to receive the misoprostol 800 mcg vaginally by trained staff in the hospital and send home after half hour of rest." ... "During follow up (where ultrasound was performed), women were questioned about side effects, duration of bleeding and pain, overall acceptability about the procedure, bleeding, abdominal cramping and side effects." p 186<br><br>Comment: Study authors do not explicitly address blinding; however, given the detail in the paper, blinding of participants and personnel to the knowledge of which intervention a participant received did not occur<br><br>No measures were used to blind participants (not possible) or personnel (possible) as to which intervention each participant received. For example, study staff placed vaginal misoprostol in control-group participants. The outcome was therefore likely to be influenced by lack of blinding and personnel's awareness of which women received which treatment and their abortion experience (i.e. clinic visits/calls with reporting of side effects prior to follow-up visit at 14 days) |
| Blinding of outcome assessment (detection bias)<br>All outcomes | High risk | All women were asked to follow up after 14 days of misoprostol administration and ultrasound was performed. They were also given instructions to come to hospital if vaginal bleeding exceeded two soaked sanitary towels in one hour for two consecutive hours. During follow up, they were questioned about side effects, duration of bleeding and pain, overall acceptability about the procedure, bleeding, abdominal cramping and side effects...<br><br>Quote: "During 14 days follow up if USG showed small retained product of conception (POC) or clinically incomplete abortion 2nd dose 400 mcg misoprostol was administered vaginally and asked to follow after one week to review USG. If the ultrasound scan on day 25-30 showed retained POC or still she had bleeding, the woman was offered a surgical termination of pregnancy. All women were permitted at any time to request a surgical procedure rather than continuing to wait for expulsion. Those women who did not attend the follow up scan answered questionnaires over the phone and complete abortion was confirmed by negative pregnancy test carried out at home and regained regu- |

**Shrestha 2014** *(Continued)*

| | | |
|---|---|---|
| | | lar normal menstrual period. Women were considered lost to follow up when their outcome of treatment was unknown and could not contact them by telephone in spite of several attempts. Thus they were excluded from analysis." p 186<br><br>Comment: Study authors do not describe who the outcome assessors were; however, based on the outcome assessment in the paper, we believe that outcome assessors knew which intervention a participant received<br><br>No measures were used to blind outcome assessors from knowledge of which intervention a participant received. The outcome measurement (abortion status) was therefore likely to be influenced by the lack of blinding of study staff |
| Incomplete outcome data (attrition bias)<br>All outcomes | Low risk | Quote: "One hundred and eighty eight women were enrolled in this study that was randomized to group A (control) and group B (study): 94 in each group. Four women, two from each group lost to follow up despite several attempts to contact by phone and excluded from analysis. Thus final analysis was performed in 184 women- 92 in each group. Baseline demographics of the two study groups were similar (Table 1)." p 187<br><br>Comment: Low risk of attrition bias due to complete description of attrition numbers in each intervention group. However, authors do not describe reasons for attrition. Missing outcome data were small and balanced in numbers across intervention groups (2% losses in each group). Several attempts were made to document their outcome of treatment, and no reasons for attrition described. These unknown outcome data were excluded from analysis and therefore unlikely to introduce bias |
| Selective reporting (reporting bias) | Unclear risk | Quote: "There was no statistically significantly difference between the groups in their side effects, patients overall acceptability of the procedure, vaginal bleeding, abdominal cramps and adverse effects except for nausea" p 188<br><br>Comment: Low risk of reporting bias because authors state both statistically significant differences as well as no statistically significant differences between groups. Insufficient information available to assess for judgement of risk. Outcomes of interest from protocol unknown. Types of failures, in addition to success, are detailed and analyzed |
| Other bias | Unclear risk | All participants were recruited from 1 teaching hospital. p 186<br><br>Comment: Although demographics of the 2 study groups were similar at baseline, it is unclear if these groups are representative of all women seeking induced abortion in the community. There is insufficient information to assess whether the single site may introduce bias, or whether there may be an additional important risk of bias to consider in the study |

**Shuchita 2008**

| | |
|---|---|
| Methods | Prospective cohort study<br><br>February 2005 to June 2005<br><br>Use of pilot group(s) for initial recruitment |
| Participants | N = 100<br><br>India. Family Welfare Center in the Department of OB/GYN at the Government Medical College in Nagpur, state of Maharashtra |

| | |
|---|---|
| **Shuchita 2008** *(Continued)* | |
| | Inclusion criteria: positive urine pregnancy test; intrauterine pregnancy of 56 days or less since LMP based on clinical exam, menstrual history and ultrasound if required; good general health; no contraindications to mifepristone or misoprostol; lived within 1 hour of the clinic, and were willing to return for at least 2 additional visits |
| Interventions | 200 mg oral mifepristone in hospital followed by 400 mcg sublingual misoprostol 2 days later, either in hospital or at home, + 4 x 500 mg paracetamol to use as needed |
| Outcomes | Sucess of medical abortion, defined as complete abortion<br><br>Secondary outcomes include: side effects; acceptability; best/worst features; companionship; compliance; contact with health services |
| Funding | NR |
| Notes | |

IVG: Interruption volontaire de grossesse; LMP: last menstrual period; MA: medical abortion; NR: not reported

## Characteristics of excluded studies *[ordered by study ID]*

| Study | Reason for exclusion |
|---|---|
| Akin 2005 | No primary outcome of interest |
| Akin 2009 | No data comparing outcomes by self vs provider administration (tried to contact authors) |
| Arvidsson 2005 | No self-administration of medical abortion |
| Blum 2004 | No data comparing outcomes by self vs provider administration (tried to contact authors) |
| Chong 2015 | No provider-administration of medical abortion |
| Conkling 2015 | No provider-administration of medical abortion |
| Creinin 2007 | No provider-administration of medical abortion |
| Gaudu 2013 | No provider-administration of medical abortion |
| Gonzalez 2001 | Women with missed, incomplete abortion, or intra-uterine fetal death |
| Kapp 2006 | No self-administration of medical abortion |
| Koh 2017 | No self-administration of medical abortion |
| Louie 2014 | No data comparing outcomes by self vs provider administration (tried to contact authors) |
| Park 2013 | No data comparing outcomes by self vs provider administration |
| Platais 2016 | No provider-administration of medical abortion. Information from this study was used in the Background section |
| Raghavan 2013 | No data comparing outcomes by self vs provider administration (tried to contact authors) |
| Rosen 1984 | Did not use mifepristone or misoprostol |

| Study | Reason for exclusion |
|---|---|
| Swica 2013 | No data comparing outcomes by self vs. provider administration |
| Tsereteli 2016 | No data comparing outcomes by self vs. provider administration (tried to contact authors) |

**Characteristics of ongoing studies** *[ordered by study ID]*

**NCT02219100**

| | |
|---|---|
| Trial name or title | Acceptability and feasibility of a demedicalized medical abortion regimen in the Caucasus |
| Methods | This study examined the acceptability and feasibility of using a simplified regimen of medical abortion in Armenia and Azerbaijan. It was hypothesized that home use of mifepristone and misoprostol, and buccal administration of misoprostol, would be both acceptable to women and efficacious.<br><br>Allocation: non-randomized<br>Intervention model: parallel assignment<br>masking: none (open label)<br>Primary purpose: health services research |
| Participants | Inclusion criteria:<br><br>• 18 years or older<br>• Good general health<br>• Living or working close to the study site<br>• Intrauterine pregnancy less than 64 days gestation<br>• Willing and able to sign consent forms<br>• Eligible for medical abortion according to the clinician's assessment<br>• Ready access to a telephone and emergency transportation<br>• Willing to provide an address and/or telephone number for purposes of follow-up<br>• Agree to comply with the study procedures and visit schedule<br><br>Exclusion criteria:<br><br>• Confirmed or suspected ectopic pregnancy or undiagnosed adnexal mass<br>• IUD in place (IUD must be removed first)<br>• Chronic renal failure<br>• Concurrent long-term corticosteroid therapy<br>• History of allergy to mifepristone, misoprostol or other prostaglandin<br>• Hemorrhagic disorders or concurrent anticoagulant therapy<br>• Inherited porphyrias<br>• Other serious physical or mental health conditions |
| Interventions | Drug: home administration of 200 mg mifepristone<br><br>Study arms:<br><br>• Experimental: home administration of mifepristone<br>  ◦ This arm consisted of women who chose home administration of 200 mg mifepristone.<br>  ◦ Intervention: drug: home administration of 200 mg mifepristone<br>• No intervention: clinic administration of mifepristone<br>  ◦ This arm consisted of women who underwent clinic administration of 200 mg mifepristone. |
| Outcomes | Primary: |

**NCT02219100** *(Continued)*

| | |
|---|---|
| | • Proportion of abortions that are complete without surgical intervention (unit: percent). (time frame: 15 days)<br>  ◦ Percentage of women with complete abortion without the need of a surgical intervention.<br>• Efficacy (time frame: 15 days)<br>  ◦ Percentage of women with complete abortion without the need of a surgical intervention.<br><br>Secondary:<br><br>• Proportion of women satisfied with procedure (unit: percent) and with side effects (unit: percent). (time frame: 15 days)<br>  ◦ Woman's satisfaction with her medical abortion procedure and side effects experienced.<br>• Acceptability (time frame: 15 days)<br>  ◦ Woman's satisfaction with her medical abortion procedure and side effects experienced.<br><br>Other prespecified outcomes:<br><br>• Acceptability (time frame: 15 days)<br>• Woman's satisfaction with her medical abortion procedure and side effects experienced.<br>• Proportion of women who select home-use of Mifepristone (time frame: 1 week)<br>• Proportion of women who select home-use of Misoprostol (time frame: 1 week) |
| Starting date | November 2010 |
| Contact information | Principal Investigator: Beverly Winikoff, Gynuity Health Projects<br><br>Principal Investigator: Rena Bagirova, Antenatal Clinic<br><br>Principal Investigator: Mehriban Huseynova, Gynecology Department of the Central Regional Hospital<br><br>Principal Investigator: Aram Avalyan, Vanadzor Hospital #1<br><br>Principal Investigator: Alla Minasyan, Gyumri Maternity Hospital |
| Notes | Study located in Armenia and Azerbaijan |

**NCT02981030**

| | |
|---|---|
| Trial name or title | Acceptability and feasibility of a simplified medical abortion service delivery in Western Ukraine: a demonstration study of 800 mcg buccal misoprostol following 200 mg mifepristone for abortion up to 70 days gestation |
| Methods | Interventional (clinical trial) |
| Participants | Inclusion criteria:<br><br>• Have an intrauterine pregnancy consistent with gestational age less than 71 days;<br>• Be able to understand and willing to sign a consent form;<br>• Be eligible for medical abortion according to the clinician's assessment;<br>• Be able to return to the clinic and able to contact study staff or emergency medical services, if needed;<br>• Be willing to provide an address and/or telephone number for purposes of follow-up;<br>• Agree to comply with the study procedures and visit schedule.<br><br>Exclusion criteria:<br><br>• Confirmed or suspected ectopic pregnancy or undiagnosed adnexal mass;<br>• Chronic renal failure; |

**NCT02981030** *(Continued)*

| | |
|---|---|
| | • Concurrent long-term corticosteroid therapy;<br>• History of allergy to mifepristone, or misoprostol or another prostaglandin;<br>• History of hemorrhagic disorders or concurrent anticoagulant therapy;<br>• History of inherited porphyrias;<br>• Intrauterine device in place (must be removed before mifepristone is administered). |
| Interventions | Experimental: Simplified medical abortion<br><br>Women seeking medical abortion will be offered the option self-administering the medications, mifepristone and misoprostol at home<br><br>Drug: Mifepristone. Women seeking medical abortion will be offered the option to take mifepristone at home<br>Drug: Misoprostol. Women seeking medical abortion will be offered the option to take misoprostol at home. Misoprostol will be administered buccally |
| Outcomes | Rate of successful abortion (time frame: 2 weeks after mifepristone administration) |
| Starting date | 23 November 2016 |
| Contact information | Principal investigator: Ingrida Platais, Gynuity Health Projects<br><br>Principal investigator: Tamar Tsereteli, Gynuity Health Projects<br><br>Principal investigator: Beverly Winikoff, Gynuity Health Projects<br><br>Study Director: Galyna Maystruk, Charitable Foundation Women Health & Family Planning |
| Notes | Study located in Ukraine |

**NCT02985229**

| | |
|---|---|
| Trial name or title | Acceptability and feasibility of medical abortion in Singapore |
| Methods | Interventional (clinical trial) |
| Participants | Inclusion criteria:<br><br>• Have an intrauterine pregnancy consistent with gestational age ≤ 70 days<br>• Aged 21 years or over<br>• Be willing and able to sign consent forms<br>• Be eligible for abortion according to current hospital guidelines<br>• Be able to return to the clinic and able to contact study staff or emergency medical services if needed<br>• Be willing to provide an address, email and/or telephone number for purposes of follow-up<br>• Agree to comply with the study procedures and visit schedule<br><br>Exclusion criteria:<br><br>• confirmed or suspected ectopic pregnancy or undiagnosed adnexal mass<br>• Chronic renal failure<br>• Concurrent long-term corticosteroid therapy<br>• History of inherited porphyrias<br>• IUD in place (must be removed after mifepristone is administered). |
| Interventions | Experimental: all participants |

**NCT02985229** *(Continued)*

| | |
|---|---|
| | All participants in the study will be given the option of home administration of 200 mg oral mifepristone and 800 µg buccal misoprostol for medical abortion<br><br>Drug: Mifepristone<br><br>The option of home or clinic administration of 200 mg oral mifepristone<br>Drug: Misoprostol: 800 µg buccal misoprostol through 70 days from the last menstrual period following administration of mifepristone |
| Outcomes | Primary:<br><br>• Rate of successful abortion (time frame: 7 to 10 days after mifepristone administration).<br>  ◦ Proportion of abortions that are complete without surgical intervention<br><br>Secondary:<br><br>• Satisfaction with the medical abortion method (time frame: 7 to 10 days after mifepristone administration).<br>  ◦ Proportion of women who are satisfied with the medical abortion method<br>• Preferred location of mifepristone administration (time frame: the day of enrollment).<br>  ◦ Proportion of women who select home use of mifepristone |
| Starting date | October 2016 |
| Contact information | Principal investigator: Beverly Winikoff, Gynuity Health Projects |
| Notes | Study located in Singapore |

**NCT03346629**

| | |
|---|---|
| Trial name or title | Outpatient service for mid-trimester termination of pregnancy |
| Methods | Interventional (clinical trial) |
| Participants | Inclusion criteria:<br><br>• Have an ongoing pregnancy of 13 to 18 weeks gestation<br>• Meet legal criteria to obtain an abortion at 13 to 18 weeks gestation (legal criteria include pregnancy resulting from rape or incest, fetal malformation and/or if the pregnancy affects the physical or mental health of the woman)<br>• Has access to a phone where she can be reached at the 2-week follow-up<br>• Be willing to follow study procedures<br><br>Exclusion criteria:<br><br>• Known allergy to mifepristone or misoprostol/prostaglandin or other contraindications to the use of mifepristone or misoprostol<br>• Any contraindications to vaginal delivery<br>• More than one prior cesarean delivery<br>• Living more than two hours away from the hospital |
| Interventions | Experimental: mifepristone + misoprostol<br><br>Intervention: 200 mg mifepristone followed 24 to 48 hours later with 400 mcg misoprostol<br><br>A single dose of 200 mg mifepristone (1 tablet) to be taken orally either at home or at the hospital, followed 24 to 48 hours later with 400 mcg misoprostol (buccal) at home. The participant will re- |

**NCT03346629** *(Continued)*

| | |
|---|---|
| | turn to the hospital 1 - 2 hours after taking the initial dose of misoprostol to receive repeated doses of 400 mcg misoprostol until the abortion occurs |
| Outcomes | Primary:<br>• Successful medical abortion (time frame: 0 to 48 hours after first dose of mifepristone).<br>  ○ Proportion of women who have a successful medical abortion without recourse to surgical intervention and return home on the same day as misoprostol induction<br>Secondary:<br>• Induction-to-abortion interval (time frame: 0 to 48 hours after first misoprostol dose)<br>  ○ Median time elapsed between administration of the first misoprostol dose until expulsion of both fetus and placenta<br>• Total dose of misoprostol (time frame: 0 to 48 hours after first misoprostol dose).<br>  ○ Average number of doses of misoprostol<br>• Safety - Proportion of participants who experience at least one of the following: extramural delivery, hemorrhage requiring transfusion, infection, uterine rupture, prolonged hospitalization, any complications (time frame: 2 weeks after initial visit).<br>  ○ Proportion of participants who experience at least one of the following: extramural delivery, hemorrhage requiring transfusion, infection, uterine rupture, prolonged hospitalization, any complications<br>• Tasks performed by certified staff (time frame: 0 to 72 hours after receipt of mifepristone).<br>  ○ Type of task performed (i.e. counseling, monitoring vital signs, administering drugs, monitoring woman's condition, post-abortion contraception, managing discharge)<br>• Hospital admission time (time frame: within 0 to 48 hours after the second dose of misoprostol).<br>  ○ Average total hospital admission time<br>• Side effects (time frame: 0 to 48 hours after first dose of misoprostol).<br>  ○ Proportion of participants experiencing side effects (severity incidence, and severity of pain based on a 0 to 10 point scale)<br>• Initiation-to-abortion interval (time frame: 0 to 72 hours after receipt of mifepristone).<br>  ○ Median time elapsed between administration of the mifepristone dose until expulsion of both fetus and placenta |
| Starting date | 1 December 2017 |
| Contact information | Principal investigator: Jennifer Blum, Gynuity Health Projects<br>Principal investigator: Monica Dragoman, Gynuity Health Projects<br>Principal investigator: Chanda Karki, Kathmandu Medical College<br>Principal investigator: Dina Abbas, Gynuity Health Projects<br>Principal investigator: Beverly Winikoff, Gynuity Health Projects<br>Principal investigator: Anand Tamang, CREHPA |
| Notes | Study located in Nepal |

**NCT03727308**

| | |
|---|---|
| Trial name or title | Study of clinic-based versus self-use of medical abortion pills (MOC) |
| Methods | Observational model: cohort<br>Time perspective: prospective<br>Sampling method: non-probability sample |

**NCT03727308** *(Continued)*

| | |
|---|---|
| Participants | Women who are pregnant and seeking abortion in study sites<br>• Women recruited from pharmacies<br>  ○ Investigators will enroll women seeking medical abortion pills without prescription from pharmacies<br>  ■ Medical abortion pills sourced from pharmacies<br>  ○ Intervention: behavioral: medical abortion pills sourced from pharmacies<br>• Women recruited from health clinics<br>  ○ Investigators will enroll women seeking medical abortion pills from clinics<br>  ■ Medical abortion pills sourced from health clinics<br>  ○ Intervention: behavioral: medical abortion pills sourced from health clinics |
| Interventions | • Behavioral: medical abortion pills sourced from pharmacies<br>  ○ 1 cohort using medical abortion pills sourced from pharmacies<br>• Behavioral: medical abortion pills sourced from health clinics<br>  ○ 1 cohort using medical abortion pills sourced from health clinics |
| Outcomes | Need for additional treatment to complete abortion (Time frame: final assessment at 30 days following mifepristone administration)<br>The primary outcome of the study will be the need for additional treatment to complete the abortion (either aspiration or repeated misoprostol) following a woman taking the medical abortion pills |
| Starting date | 30 May 2018 |
| Contact information | Contact: Nathalie Kapp, MD, MPH; kappn@ipas.org<br>Contact: Erin Pearson, PhD, MPH; pearsone@ipas.org |
| Notes | Study located in Cambodia and Ghana |

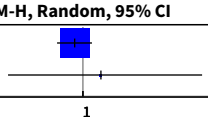
## DATA AND ANALYSES

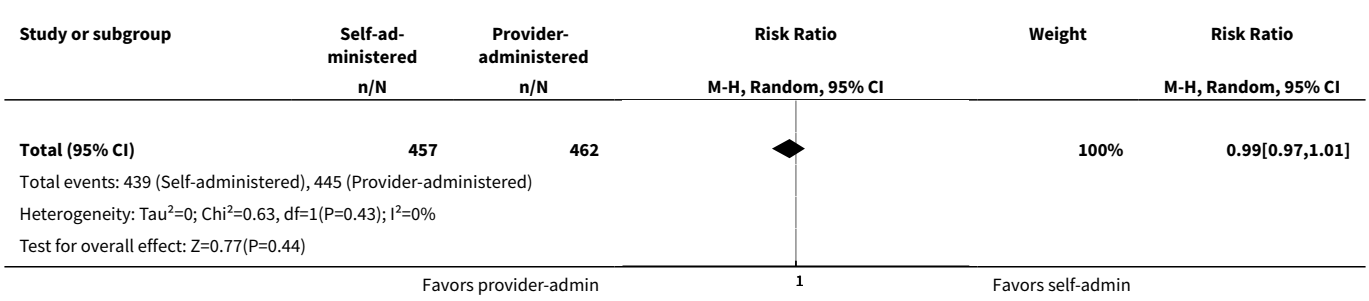
### Comparison 1. Medical abortion - RCTs

| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|---|---|---|---|---|
| 1 Success of medical abortion - RCTs | 2 | 919 | Risk Ratio (M-H, Random, 95% CI) | 0.99 [0.97, 1.01] |

### Analysis 1.1. Comparison 1 Medical abortion - RCTs, Outcome 1 Success of medical abortion - RCTs.

| Study or subgroup | Self-administered n/N | Provider-administered n/N | Risk Ratio M-H, Random, 95% CI | Weight | Risk Ratio M-H, Random, 95% CI |
|---|---|---|---|---|---|
| Li 2017 | 357/365 | 365/370 | | 96.78% | 0.99[0.97,1.01] |
| Shrestha 2014 | 82/92 | 80/92 | | 3.22% | 1.02[0.92,1.14] |

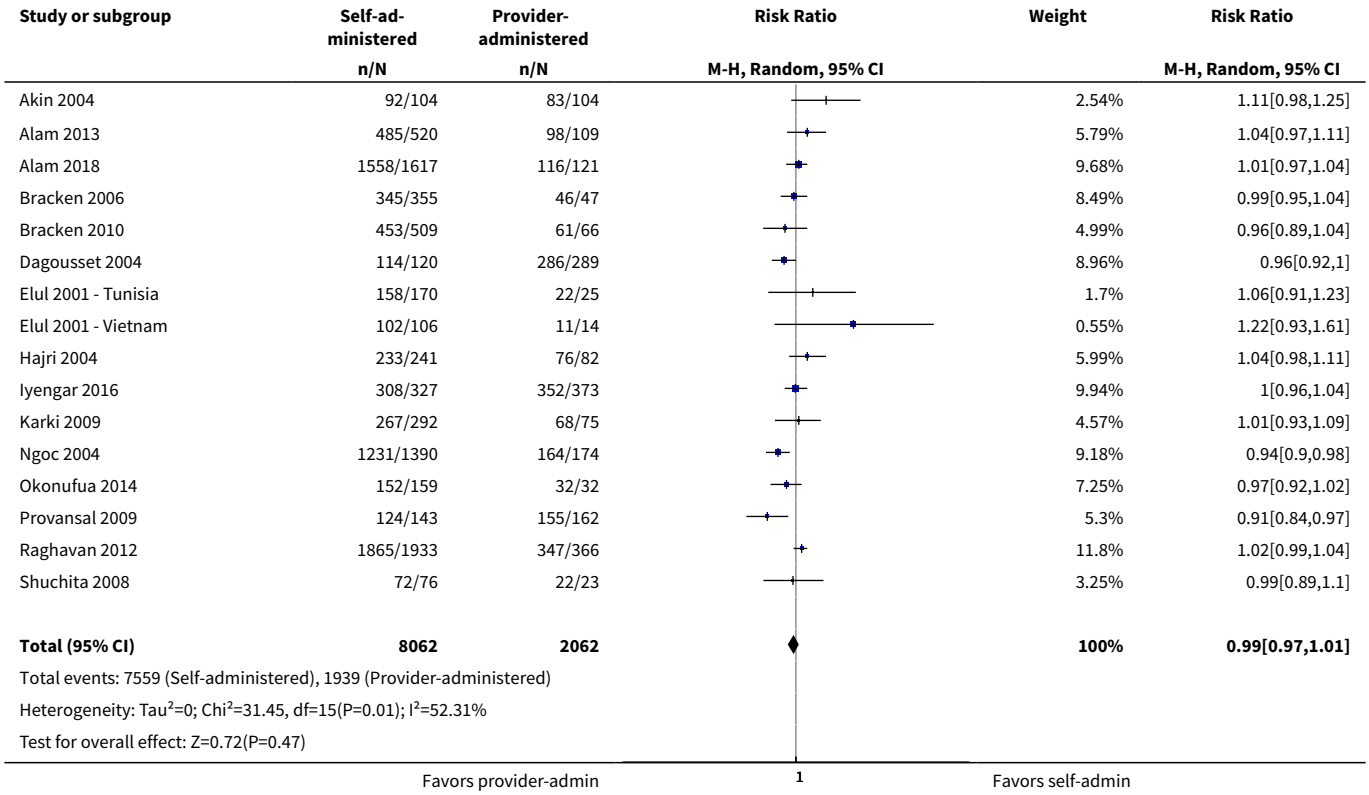





## Comparison 2. Medical abortion - NRS

| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|---|---|---|---|---|
| 1 Success of medical abortion - NRS | 16 | 10124 | Risk Ratio (M-H, Random, 95% CI) | 0.99 [0.97, 1.01] |

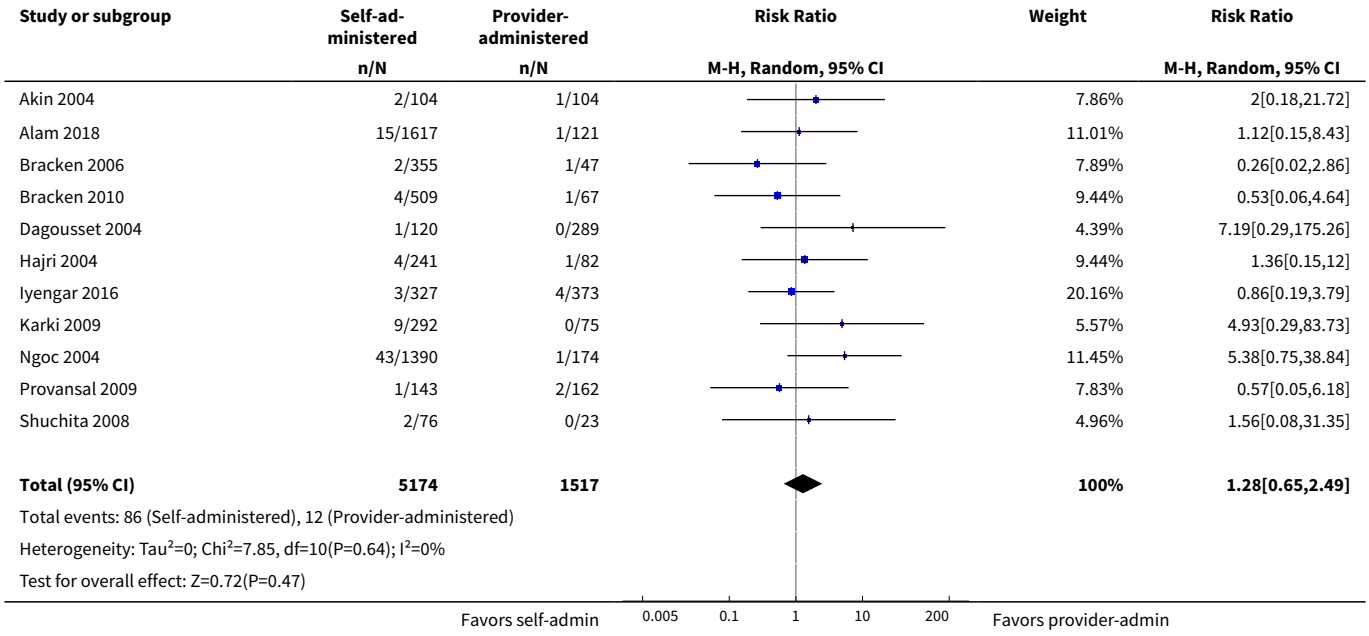
### Analysis 2.1. Comparison 2 Medical abortion - NRS, Outcome 1 Success of medical abortion - NRS.



## Comparison 3. Ongoing pregnancy - NRS

| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|---|---|---|---|---|
| 1 Ongoing pregnancy | 11 | 6691 | Risk Ratio (M-H, Random, 95% CI) | 1.28 [0.65, 2.49] |

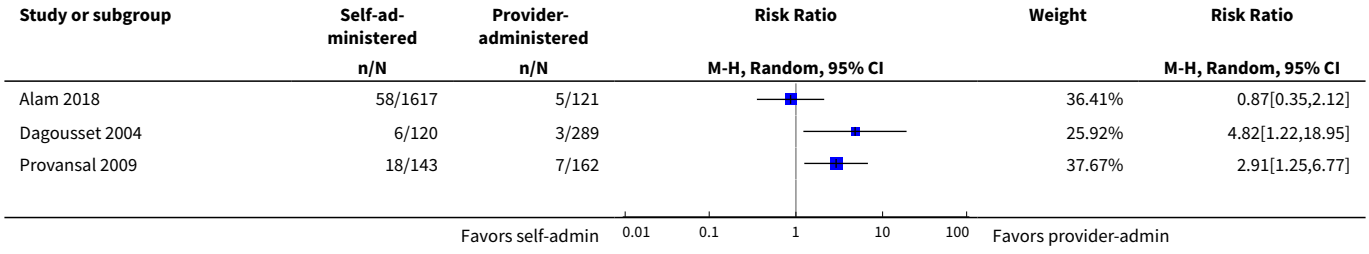
### Analysis 3.1. Comparison 3 Ongoing pregnancy - NRS, Outcome 1 Ongoing pregnancy.

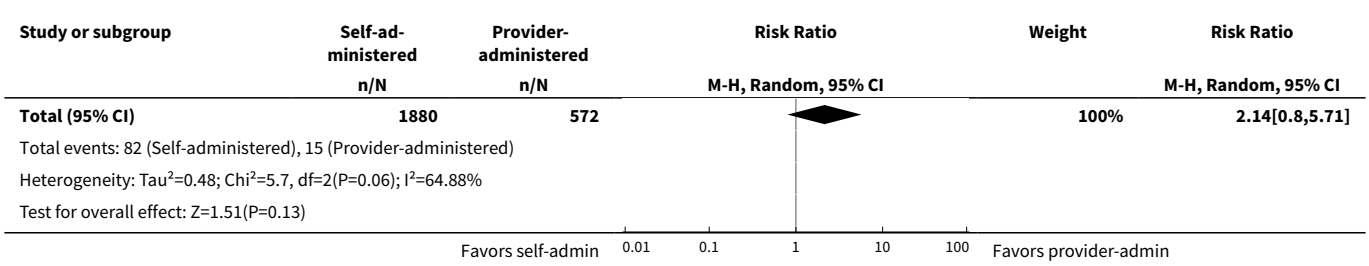



## Comparison 4. Any complication requiring surgical intervention

| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|---|---|---|---|---|
| 1 Any complication requiring surgical intervention | 3 | 2452 | Risk Ratio (M-H, Random, 95% CI) | 2.14 [0.80, 5.71] |

### Analysis 4.1. Comparison 4 Any complication requiring surgical intervention, Outcome 1 Any complication requiring surgical intervention.

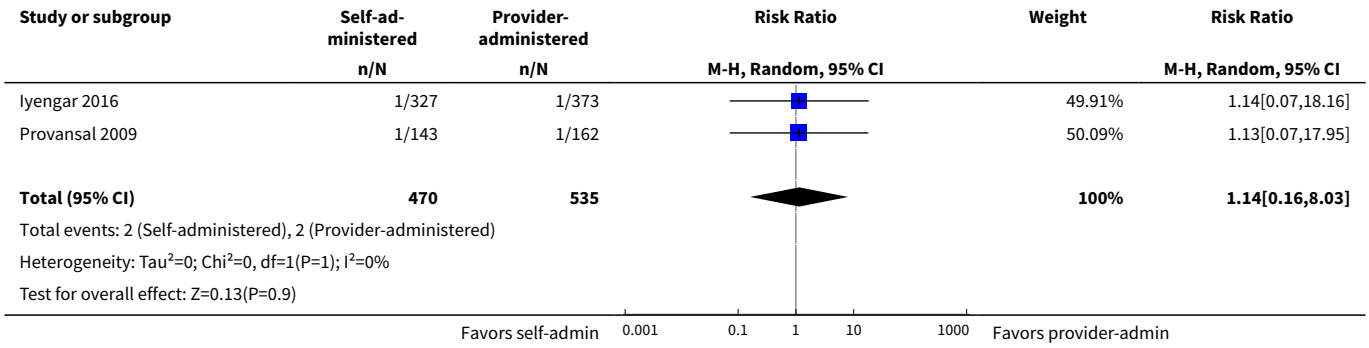




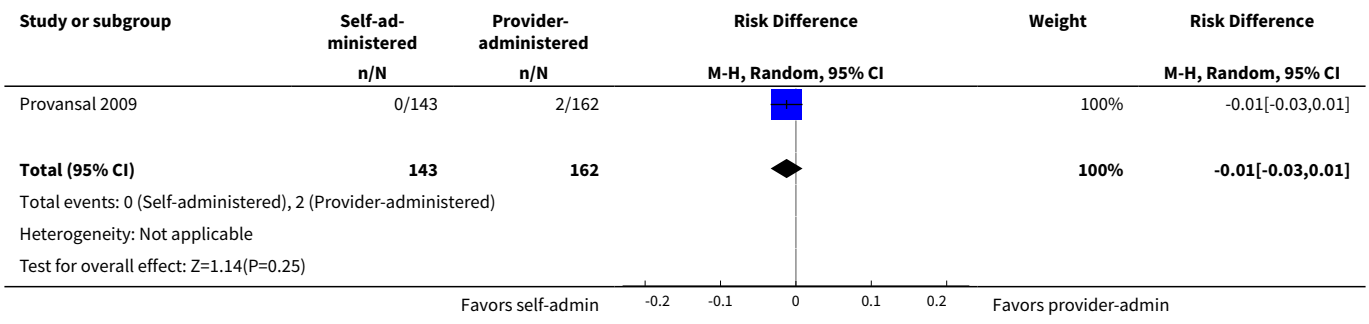

## Comparison 5. Complications

| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|---|---|---|---|---|
| 1 Hemorrhage | 2 | 1005 | Risk Ratio (M-H, Random, 95% CI) | 1.14 [0.16, 8.03] |
| 2 Infection | 1 | 305 | Risk Difference (M-H, Random, 95% CI) | -0.01 [-0.03, 0.01] |
| 3 Requiring hospitalization | 2 | 2147 | Risk Ratio (M-H, Random, 95% CI) | 1.58 [0.08, 29.81] |

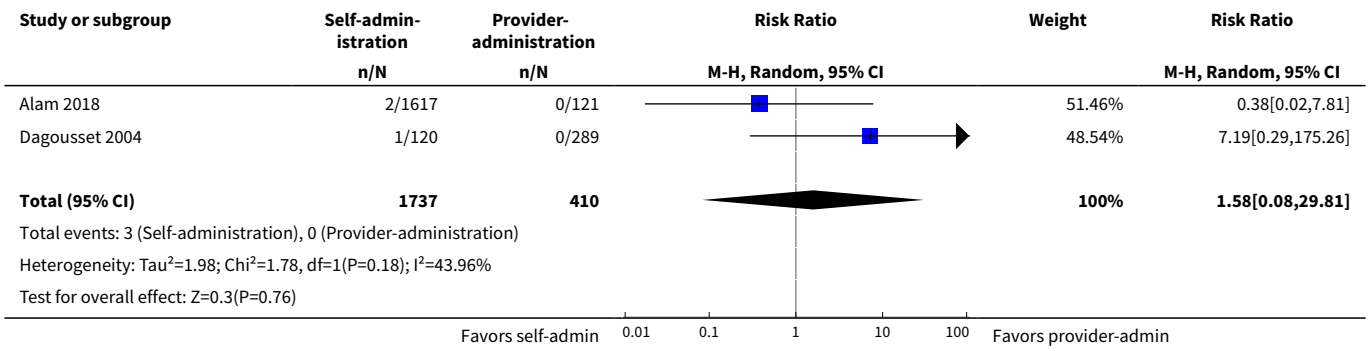
### Analysis 5.1. Comparison 5 Complications, Outcome 1 Hemorrhage.




### Analysis 5.2. Comparison 5 Complications, Outcome 2 Infection.



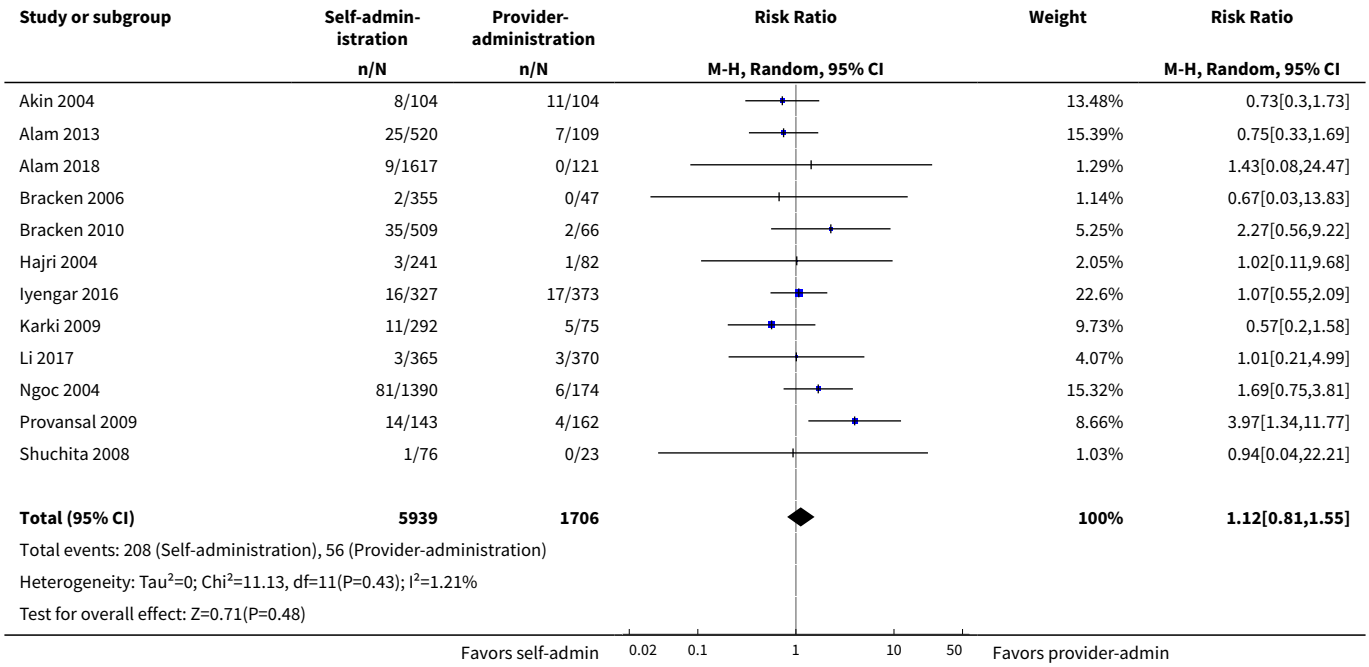
### Analysis 5.3. Comparison 5 Complications, Outcome 3 Requiring hospitalization.




## Comparison 6. Incomplete medical abortion

| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|---|---|---|---|---|
| 1 Incomplete | 12 | 7645 | Risk Ratio (M-H, Random, 95% CI) | 1.12 [0.81, 1.55] |

### Analysis 6.1. Comparison 6 Incomplete medical abortion, Outcome 1 Incomplete.



## Comparison 7. Side effects (dichotomous)

| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|---|---|---|---|---|
| 1 Nausea | 7 | 3874 | Risk Ratio (M-H, Random, 95% CI) | 0.85 [0.71, 1.02] |
| 2 Heavy bleeding | 5 | 3272 | Risk Ratio (M-H, Random, 95% CI) | 1.04 [0.91, 1.20] |
| 3 Vomiting | 6 | 3568 | Risk Ratio (M-H, Random, 95% CI) | 1.09 [0.89, 1.34] |
| 4 Pain/cramps | 4 | 1640 | Risk Ratio (M-H, Random, 95% CI) | 0.96 [0.86, 1.08] |
| 5 Fever/chills | 4 | 2643 | Risk Ratio (M-H, Random, 95% CI) | 1.08 [0.89, 1.31] |
| 6 Diarrhea | 4 | 3286 | Risk Ratio (M-H, Random, 95% CI) | 0.96 [0.72, 1.29] |

### Analysis 7.1. Comparison 7 Side effects (dichotomous), Outcome 1 Nausea.

| Study or subgroup | Self-administered n/N | Provider-administered n/N | Risk Ratio M-H, Random, 95% CI | Weight | Risk Ratio M-H, Random, 95% CI |
|---|---|---|---|---|---|
| Alam 2013 | 176/520 | 54/109 | | 19.93% | 0.68[0.55,0.86] |
| Alam 2018 | 1137/1617 | 86/121 | | 25.57% | 0.99[0.88,1.11] |
| Bracken 2006 | 174/279 | 18/27 | | 16.94% | 0.94[0.71,1.24] |
| Li 2017 | 63/365 | 62/370 | | 15.18% | 1.03[0.75,1.42] |
| Okonufua 2014 | 37/154 | 11/30 | | 7.93% | 0.66[0.38,1.13] |
| Shrestha 2014 | 5/92 | 15/92 | | 3.12% | 0.33[0.13,0.88] |
| Shuchita 2008 | 39/75 | 13/23 | | 11.33% | 0.92[0.6,1.4] |
| **Total (95% CI)** | **3102** | **772** | | **100%** | **0.85[0.71,1.02]** |
| Total events: 1631 (Self-administered), 259 (Provider-administered) | | | | | |
| Heterogeneity: $Tau^2$=0.03; $Chi^2$=14.84, df=6(P=0.02); $I^2$=59.57% | | | | | |
| Test for overall effect: Z=1.76(P=0.08) | | | | | |



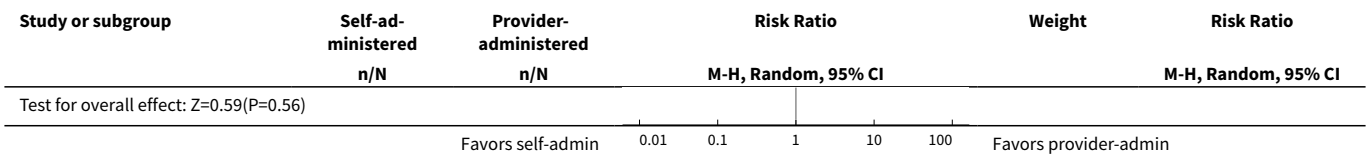

Favors self-admin — Favors provider-admin

### Analysis 7.2. Comparison 7 Side effects (dichotomous), Outcome 2 Heavy bleeding.

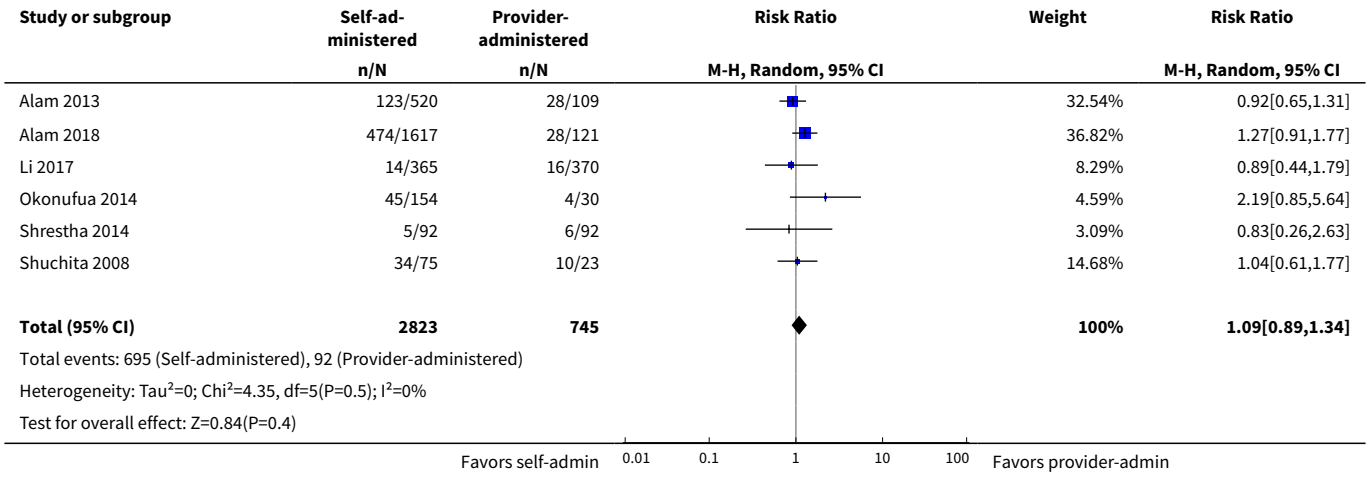
| Study or subgroup | Self-administered n/N | Provider-administered n/N | Risk Ratio M-H, Random, 95% CI | Weight | Risk Ratio M-H, Random, 95% CI |
|---|---|---|---|---|---|
| Alam 2013 | 363/520 | 71/109 | | 34.23% | 1.07[0.92,1.24] |
| Alam 2018 | 3/1617 | 0/121 | | 0.23% | 0.53[0.03,10.16] |
| Iyengar 2016 | 21/290 | 12/333 | | 3.93% | 2.01[1.01,4.01] |
| Okonufua 2014 | 133/154 | 27/30 | | 36.64% | 0.96[0.84,1.1] |
| Shuchita 2008 | 64/75 | 19/23 | | 24.97% | 1.03[0.84,1.27] |
| **Total (95% CI)** | **2656** | **616** | | **100%** | **1.04[0.91,1.2]** |
| Total events: 584 (Self-administered), 129 (Provider-administered) | | | | | |
| Heterogeneity: $Tau^2$=0.01; $Chi^2$=6.99, df=4(P=0.14); $I^2$=42.73% | | | | | |



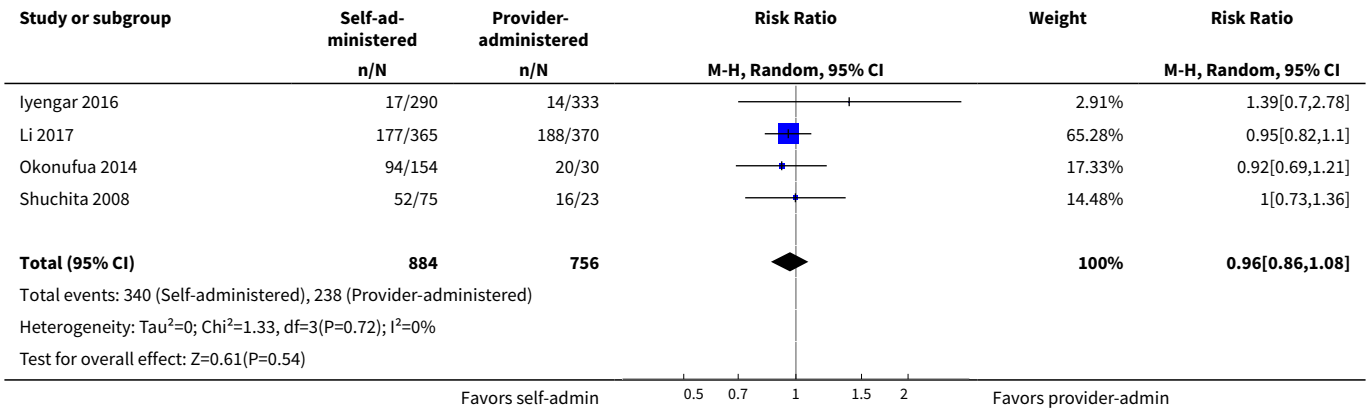

Favors self-admin — Favors provider-admin



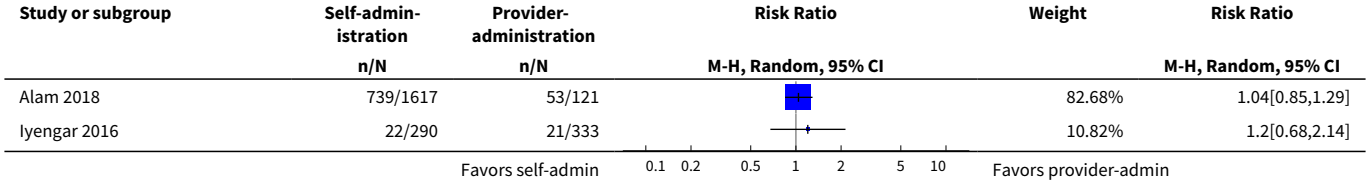

## Analysis 7.3. Comparison 7 Side effects (dichotomous), Outcome 3 Vomiting.

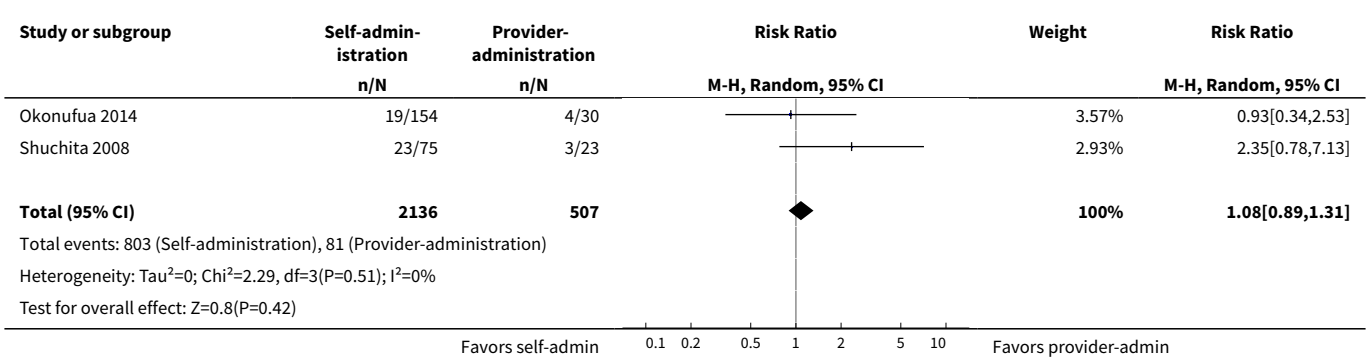



## Analysis 7.4. Comparison 7 Side effects (dichotomous), Outcome 4 Pain/cramps.

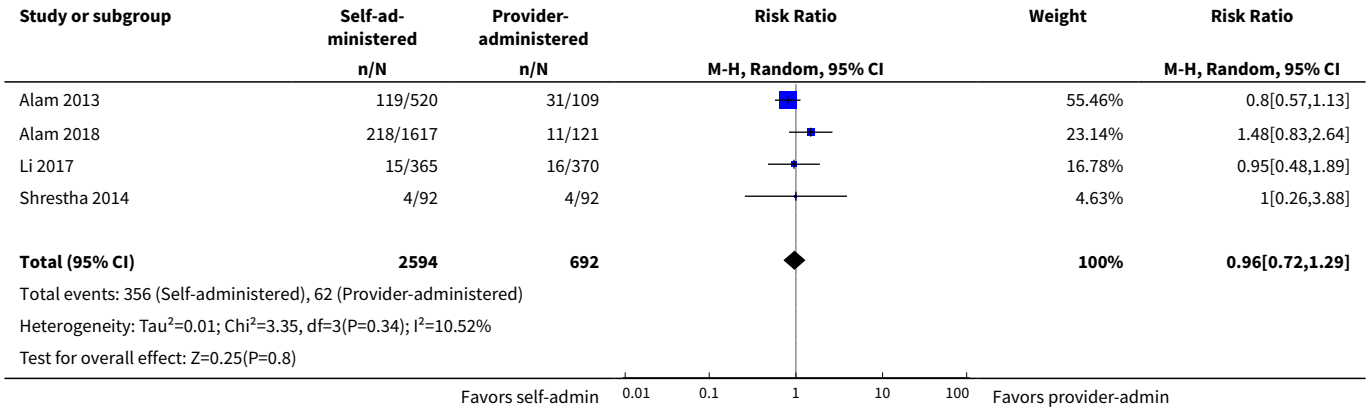



## Analysis 7.5. Comparison 7 Side effects (dichotomous), Outcome 5 Fever/chills.





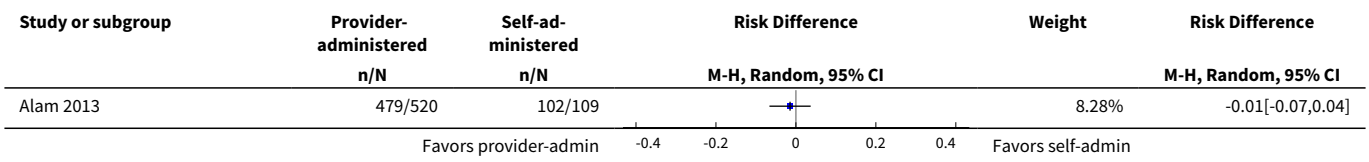

### Analysis 7.6. Comparison 7 Side effects (dichotomous), Outcome 6 Diarrhea.

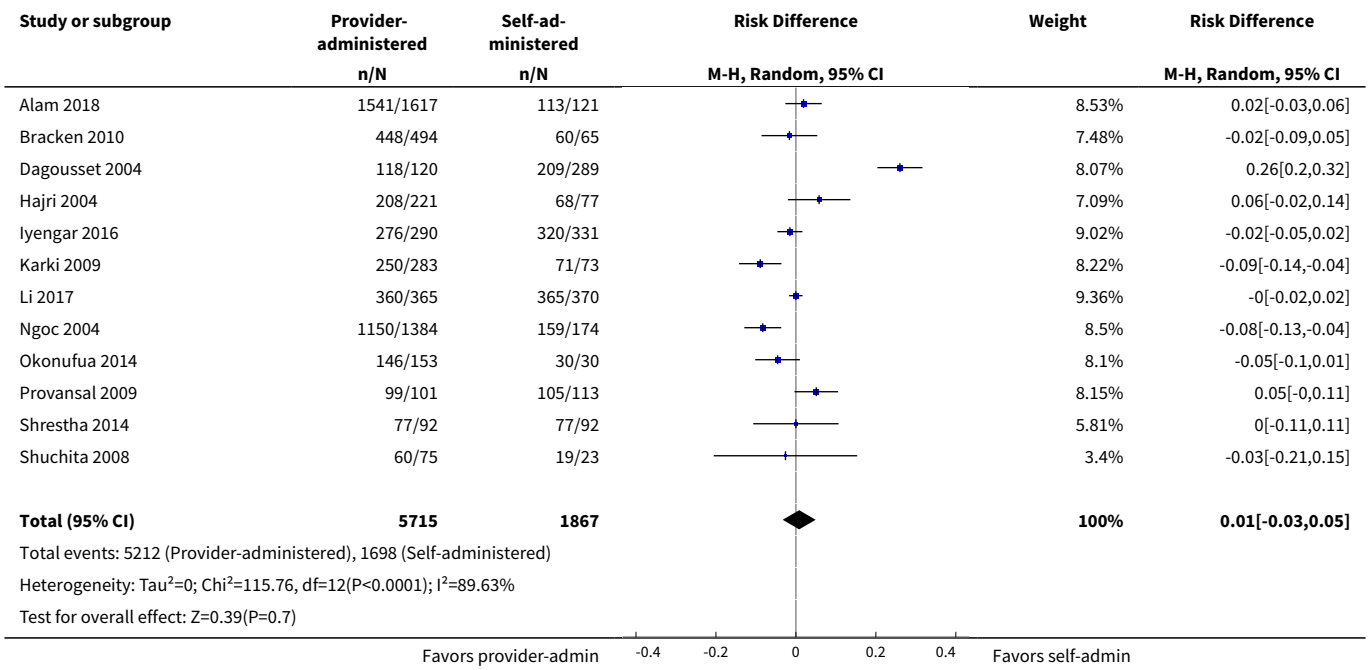



## Comparison 8. Acceptability

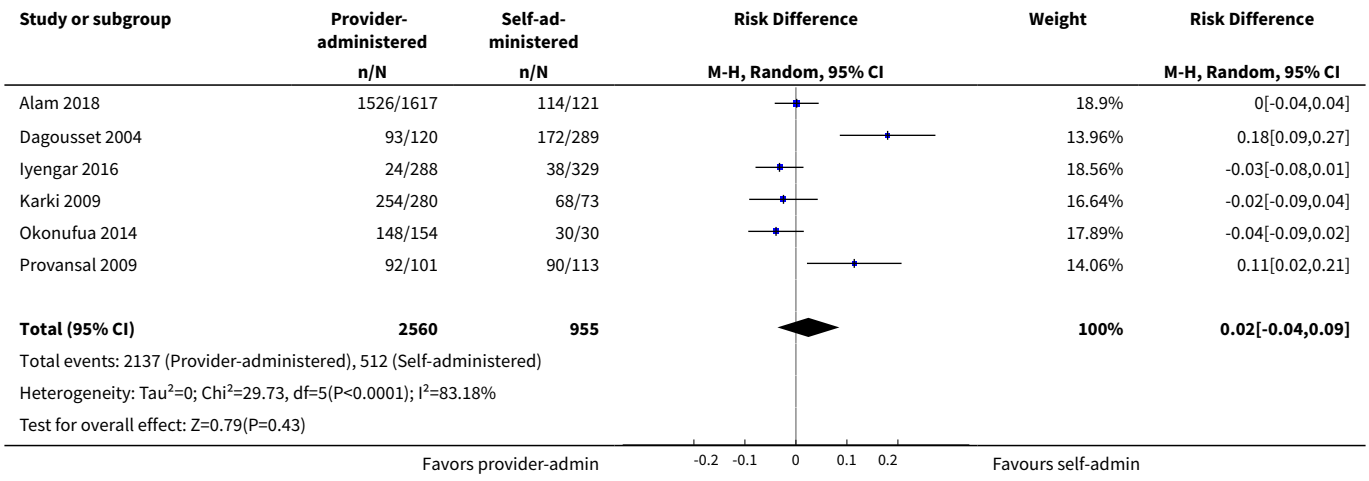
| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|---|---|---|---|---|
| 1 Satisfied or highly satisfied | 13 | 7582 | Risk Difference (M-H, Random, 95% CI) | 0.01 [-0.03, 0.05] |
| 2 Would choose MA again | 6 | 3515 | Risk Difference (M-H, Random, 95% CI) | 0.02 [-0.04, 0.09] |
| 3 Would recommend to a friend | 6 | 3513 | Risk Difference (M-H, Random, 95% CI) | 0.06 [-0.04, 0.15] |

### Analysis 8.1. Comparison 8 Acceptability, Outcome 1 Satisfied or highly satisfied.

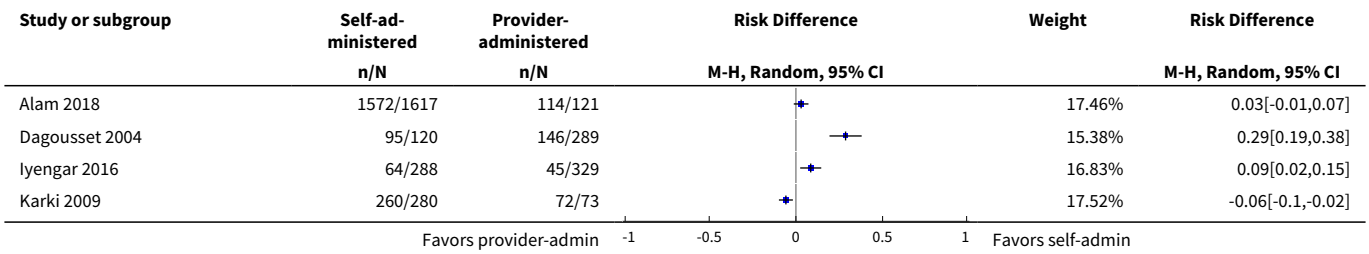


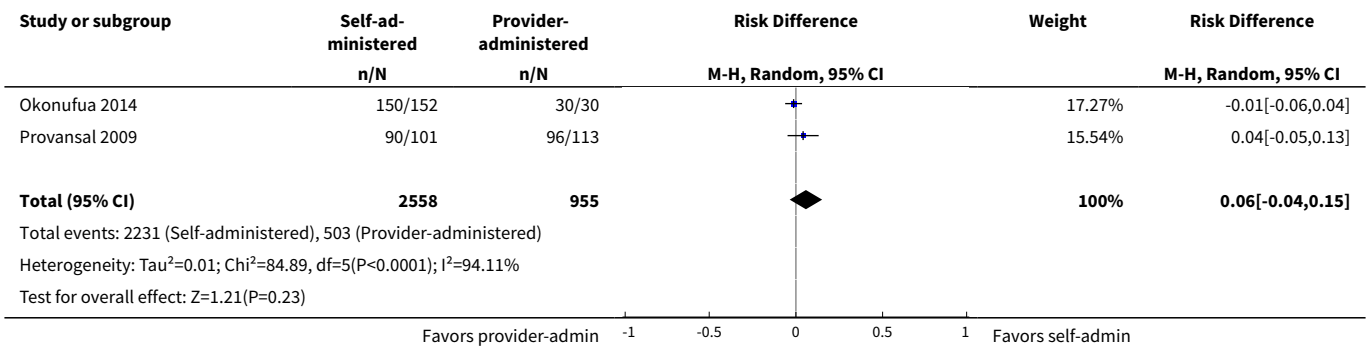



## Analysis 8.2. Comparison 8 Acceptability, Outcome 2 Would choose MA again.




## Analysis 8.3. Comparison 8 Acceptability, Outcome 3 Would recommend to a friend.

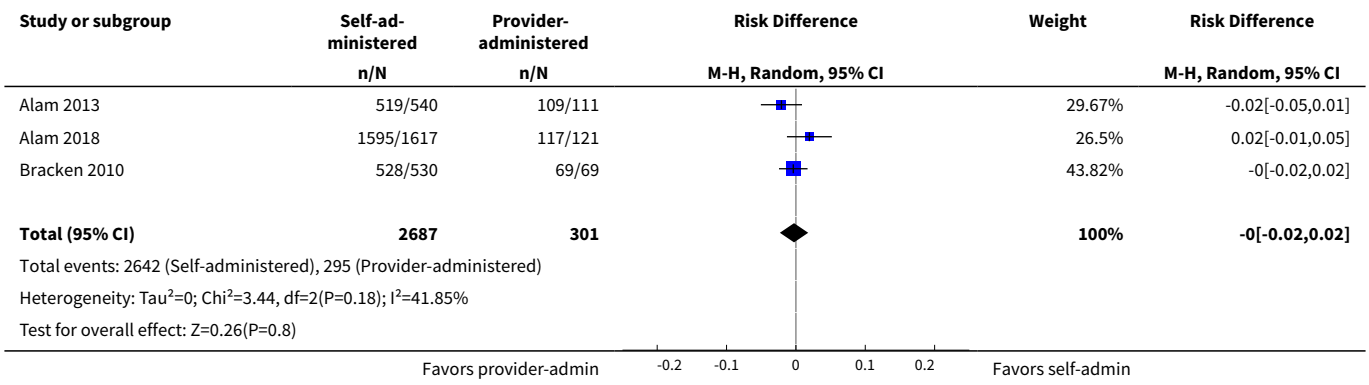





## Comparison 9. Compliance with protocol - see 'Additional tables'

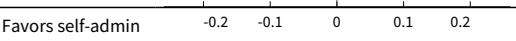
| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|---|---|---|---|---|
| 1 Perfect use | 3 | 2988 | Risk Difference (M-H, Random, 95% CI) | -0.00 [-0.02, 0.02] |
| 2 Did not complete protocol | 4 | 2164 | Risk Difference (M-H, Random, 95% CI) | -0.01 [-0.03, 0.02] |
| 3 Misoprostol not taken on time | 4 | 2608 | Risk Difference (M-H, Random, 95% CI) | -0.00 [-0.03, 0.02] |
| 4 Did not return to confirm abortion status | 3 | 2988 | Risk Difference (M-H, Random, 95% CI) | -0.01 [-0.04, 0.03] |

### Analysis 9.1. Comparison 9 Compliance with protocol - see 'Additional tables', Outcome 1 Perfect use.



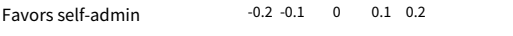
## Analysis 9.2. Comparison 9 Compliance with protocol - see 'Additional tables', Outcome 2 Did not complete protocol.

| Study or subgroup | Self-administered n/N | Provider-administered n/N | Risk Difference M-H, Random, 95% CI | Weight | Risk Difference M-H, Random, 95% CI |
|---|---|---|---|---|---|
| Bracken 2010 | 2/530 | 0/69 | | 30.08% | 0[-0.02,0.02] |
| Iyengar 2016 | 2/333 | 14/389 | | 30.25% | -0.03[-0.05,-0.01] |
| Li 2017 | 7/372 | 2/372 | | 32.85% | 0.01[-0,0.03] |
| Shuchita 2008 | 1/76 | 1/23 | | 6.81% | -0.03[-0.12,0.06] |
| **Total (95% CI)** | **1311** | **853** | | **100%** | **-0.01[-0.03,0.02]** |
| Total events: 12 (Self-administered), 17 (Provider-administered) | | | | | |
| Heterogeneity: $Tau^2$=0; $Chi^2$=12.85, df=3(P=0); $I^2$=76.66% | | | | | |
| Test for overall effect: Z=0.44(P=0.66) | | | | | |




## Analysis 9.3. Comparison 9 Compliance with protocol - see 'Additional tables', Outcome 3 Misoprostol not taken on time.

| Study or subgroup | Self-administered n/N | Provider-administered n/N | Risk Difference M-H, Random, 95% CI | Weight | Risk Difference M-H, Random, 95% CI |
|---|---|---|---|---|---|
| Alam 2013 | 1/540 | 0/111 | | 63.58% | 0[-0.01,0.01] |
| Alam 2018 | 22/1617 | 4/121 | | 27.03% | -0.02[-0.05,0.01] |
| Elul 2001 - Vietnam | 2/106 | 0/14 | | 4.31% | 0.02[-0.08,0.11] |
| Shuchita 2008 | 1/76 | 1/23 | | 5.09% | -0.03[-0.12,0.06] |
| **Total (95% CI)** | **2339** | **269** | | **100%** | **-0[-0.03,0.02]** |
| Total events: 26 (Self-administered), 5 (Provider-administered) | | | | | |
| Heterogeneity: $Tau^2$=0; $Chi^2$=3.98, df=3(P=0.26); $I^2$=24.54% | | | | | |
| Test for overall effect: Z=0.46(P=0.64) | | | | | |




## Analysis 9.4. Comparison 9 Compliance with protocol - see 'Additional tables', Outcome 4 Did not return to confirm abortion status.

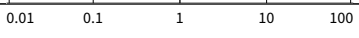
| Study or subgroup | Self-administered n/N | Provider-administered n/N | Risk Difference M-H, Random, 95% CI | Weight | Risk Difference M-H, Random, 95% CI |
|---|---|---|---|---|---|
| Alam 2013 | 20/540 | 2/111 | | 38.52% | 0.02[-0.01,0.05] |
| Alam 2018 | 2/1617 | 4/121 | | 36.7% | -0.03[-0.06,0] |
| Bracken 2010 | 19/530 | 3/69 | | 24.78% | -0.01[-0.06,0.04] |
| **Total (95% CI)** | **2687** | **301** | | **100%** | **-0.01[-0.04,0.03]** |
| Total events: 41 (Self-administered), 9 (Provider-administered) | | | | | |
| Heterogeneity: $Tau^2$=0; $Chi^2$=5.42, df=2(P=0.07); $I^2$=63.12% | | | | | |
| Test for overall effect: Z=0.36(P=0.72) | | | | | |

## Comparison 10. Contact with health services

| Outcome or subgroup title | No. of studies | No. of participants | Statistical method | Effect size |
|---|---|---|---|---|
| 1 Called clinic/hotline | 6 | 5277 | Risk Ratio (M-H, Random, 95% CI) | 1.35 [0.65, 2.81] |
| 2 Unscheduled clinic visits | 6 | 5774 | Risk Difference (M-H, Random, 95% CI) | -0.01 [-0.04, 0.03] |

### Analysis 10.1. Comparison 10 Contact with health services, Outcome 1 Called clinic/hotline.

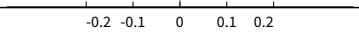
| Study or subgroup | Self-administered n/N | Provider-administered n/N | Risk Ratio M-H, Random, 95% CI | Weight | Risk Ratio M-H, Random, 95% CI |
|---|---|---|---|---|---|
| Alam 2013 | 71/629 | 21/629 | | 18.59% | 3.38[2.1,5.43] |
| Alam 2018 | 564/1619 | 66/125 | | 19.92% | 0.66[0.55,0.79] |
| Elul 2001 - Vietnam | 8/106 | 1/14 | | 8.02% | 1.06[0.14,7.83] |
| Karki 2009 | 63/323 | 16/77 | | 18.49% | 0.94[0.58,1.53] |
| Ngoc 2004 | 216/1390 | 12/174 | | 18.03% | 2.25[1.29,3.94] |
| Okonufua 2014 | 39/159 | 7/32 | | 16.95% | 1.12[0.55,2.28] |
| **Total (95% CI)** | **4226** | **1051** | | **100%** | **1.35[0.65,2.81]** |
| Total events: 961 (Self-administered), 123 (Provider-administered) | | | | | |
| Heterogeneity: $Tau^2$=0.69; $Chi^2$=64.92, df=5(P<0.0001); $I^2$=92.3% | | | | | |
| Test for overall effect: Z=0.81(P=0.42) | | | | | |




Favours self-admin | Favours provider-admin

### Analysis 10.2. Comparison 10 Contact with health services, Outcome 2 Unscheduled clinic visits.

| Study or subgroup | Self-administered n/N | Provider-administered n/N | Risk Difference M-H, Random, 95% CI | Weight | Risk Difference M-H, Random, 95% CI |
|---|---|---|---|---|---|
| Alam 2013 | 8/629 | 3/629 | | 27.17% | 0.01[-0,0.02] |
| Alam 2018 | 129/1617 | 13/121 | | 17.03% | -0.03[-0.08,0.03] |
| Iyengar 2016 | 47/290 | 72/333 | | 16% | -0.05[-0.12,0.01] |
| Karki 2009 | 36/323 | 13/77 | | 10.68% | -0.06[-0.15,0.03] |
| Ngoc 2004 | 126/1390 | 8/174 | | 22.48% | 0.04[0.01,0.08] |
| Okonufua 2014 | 24/159 | 4/32 | | 6.65% | 0.03[-0.1,0.15] |
| **Total (95% CI)** | **4408** | **1366** | | **100%** | **-0.01[-0.04,0.03]** |
| Total events: 370 (Self-administered), 113 (Provider-administered) | | | | | |
| Heterogeneity: $Tau^2$=0; $Chi^2$=19.76, df=5(P=0); $I^2$=74.7% | | | | | |
| Test for overall effect: Z=0.29(P=0.77) | | | | | |




Favors self-admin | Favors provider-admin

## ADDITIONAL TABLES

**Table 1. Other data**

| Analyses | Missing data | Unpublished data | Unestimatable data | Comments |
|---|---|---|---|---|
| **PRIMARY ANALYSES** | | | | |
| Successful medical abortion | - | Alam 2013 - disaggregated data by group from trialist<br>Alam 2018 - disaggregated data by group from trialist<br>Dagousset 2004 - disaggregated data by group was published in Ngo 2011<br>Ngoc 2004 - disaggregated data by group was published in Ngo 2011<br>Raghavan 2012 - disaggregated data by group from trialist<br>Okonufua 2014 - disaggregated data by group from trialist | - | - |
| Successful medical abortion - subgroup analysis on maximum gestational age | Same as success of medical abortion | | | No GA (gestational age) greater than 9 weeks |
| Successful medical abortion- subgroup analysis on LMRS vs HRS | Same as success of medical abortion | | | Both RCTs in LMRS (low-middle resource settings) |
| Ongoing pregnancy meta-analysis | Alam 2013: self = 3/520, provider = 3/? | Alam 2018 - disaggregated data by group from trialist | Shrestha 2014: self = 0/92, provider = 0/92 | Shrestha 2014 *: not estimatable in meta analysis because 0 events in each group.*<br>Alam 2013 *: missing/not included because there was no data reported for total number of women in provider group.* |
| Complications requiring surgical intervention meta-analysis | Alam 2013: self = 35/?, provider= 11/?<br>Raghavan 2012: self = 6/?, provider = 3/? | Alam 2018 - disaggregated data by group from trialist | - | Alam 2013 *: missing/not included because we did not have the total number of women in each group.* Raghavan 2012 *: missing/not included because we did not have the total number of women in each group.* |
| Complications requiring surgical intervention | - | Dagousset 2004 - disaggregated data by group was published in Ngo 2011 | | - |

**Table 1. Other data** *(Continued)*

| | | | | |
|---|---|---|---|---|
| subgroup analysis on maximum gestational age | | Alam 2018 - disaggregated data by group from trialist | | |
| **SECONDARY ANALYSES** | | | | |
| **Complications** | | | | |
| Hematoma | - | | | No studies reported on hematoma so not included in meta-analysis |
| Hemorrhage | - | | | - |
| Infection | - | | | - |
| Requiring hospitalization | - | Alam 2018 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data | - | - |
| Advanced pregnancies, inc. mortality | - | | | No studies reported complications of advanced pregnancies so not included in meta-analysis |
| Incomplete | Dagousset 2004 - no data on provider group (self = 5/120) | Alam 2013: disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data<br>Alam 2018 - disaggregated data by group from trialist | - | Dagousset 2004 *: Missing/not included because we did not have data on the provider group.* |
| **Acceptability** | | | | |
| Acceptability - satisfied/highly satisfied with medical abortion method | - | Alam 2013: disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data<br>Alam 2018 disaggregated data by group from trialist<br>Dagousset 2004 disaggregated data by group was published in Ngo 2011; denominators were calculated by review authors using numerators and percent data<br>Ngoc 2004 - denominators were calculated by review authors from narrative in study using numerators and percent data<br>Okonufua 2014 - disaggregated data by group from trialist | - | - |
| Acceptability - would choose | Alam 2013 - no denominators | Alam 2013: disaggregated data by group from trialist | - | Alam 2013 : missing/not included because we |

**Table 1. Other data** *(Continued)*

| | | | | |
|---|---|---|---|---|
| medical abortion method again | (self = 479/?, provider = 97/?) | | | did not have the total number of women in each group |
| | - | Alam 2018 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data | | - |
| | | Okonufua 2014 - disaggregated data by group from trialist | | |
| Acceptability - would recommend medical abortion method to a friend | Alam 2013 - no denominators (self = 483/?, 101/?) | Alam 2018 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data | - | Alam 2013 : missing/not included because we did not have the total number of women in each group |
| | Hajri 2004 - no denominators (self = 141/?, provider = 62/?) | Dagousset 2004 - denominators were calculated by review authors using numerators and percent data | | Hajri 2004 : missing/not included because we did not have the total number of women in each group |
| | - | Okonufua 2014 - disaggregated data by group from trialist | | - |
| Acceptability - would select home use of misoprostol for future medical abortion | Alam 2018 - no denominators (self = 1319/?, provider = 69/?) | Alam 2013: disaggregated data by group from trialist | - | Alam 2018 : missing/not included because we did not have the total number of women in each group |
| | Shuchita 2008 - no provider group data (self = 66/75) | Okonufua 2014 - disaggregated data by group from trialist | | Shuchita 2008 : missing/not included because we did not have data on the provider group |
| Acceptablility - would select clinic use of misoprostol for future medical abortion | Alam 2018 - numerators received from trialists but no denominators (self = 206/?, provider = 45/?) | Alam 2013 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data | - | Alam 2018 : missing/not included because we did not have the total number of women in each group |
| | Elul 2001 - Tunisia; Elul 2001 - Vietnam - no denominators (Tunisia self = 7/?, provider = 10/?; Vietnam self = 7/?, provider = 10/?) | Okonufua 2014 - disaggregated data by group from trialist | | Elul 2001 - Tunisia; Elul 2001 - Vietnam : missing/not included because we did not have the total number of women in each group |
| **Side effects - dichotomous** | | | | |

**Table 1. Other data** *(Continued)*

| | | | | |
|---|---|---|---|---|
| Nausea | - | Alam 2013 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data<br>Alam 2018 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data<br>Okonufua 2014 - disaggregated data by group from trialist | - | - |
| Heavy bleeding | | Alam 2013 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data<br>Alam 2018 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data<br>Okonufua 2014 - disaggregated data by group from trialist | - | - |
| Vomiting | - | Alam 2013 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data<br>Alam 2018 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data<br>Okonufua 2014 - disaggregated data by group from trialist | - | - |
| Pain/cramps | - | Okonufua 2014 - disaggregated data by group from trialist | - | - |
| Fever/chills | - | Alam 2018 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data<br>Okonufua 2014 - disaggregated data by group from trialist | - | - |
| Diarrhea | - | Alam 2013 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data<br>Alam 2018 - disaggregated data by group from trialist and denominators were calcu- | - | - |

**Table 1. Other data** *(Continued)*

| | | | | |
|---|---|---|---|---|
| | | lated by review authors using numerators and percent data | | |
| **Side effects - continuous** | | | | |
| Nausea<br>Heavy bleeding<br>Vomiting<br>Pain and cramps<br>Fever/chills | Ngoc 2004 - no standard deviations available for each group | Okonufua 2014 - disaggregated data by group from trialist | - | Ngoc 2004 : missing/not included because we did not have standard deviations available for each group, only mean days |
| Diarrhea | | | | No continuous data reported for diarrhe*a* |
| **SUBSIDIARY ANALYSES** | | | | |
| **Compliance with protocol** | | | | |
| Perfect use | - | Alam 2013: disaggregated data by group from trialist<br>Alam 2018: disaggregated data by group from trialist | - | - |
| Did not complete protocol | Dagousset 2004 - no data available for provider group (self = 0/120) | - | Alam 2013: disaggregated data by group from trialist but not estimatable because both numerators are 0 (self = 0/540, provider = 0/109)<br>Alam 2018: disaggregated data by group from trialist but not estimatable because both numerators are 0 (self = 0/1617, provider = 0/117) | Dagousset 2004 : missing/not included because we did not have data on the provider group.<br>Alam 2013 : Not estimatable because 0 events in each group<br>Alam 2018 : not estimatable because 0 events in each group |
| Misoprostol not taken on time | Elul 2001 - Tunisia- no data available for provider group (self = 2/166) | Alam 2013: disaggregated data by group from trialist<br>Alam 2018: disaggregated data by group from trialist | - | Elul 2001 - Tunisia : missing/not included because we did not have data on the provider group |
| Did not return to confirm abortion status | Dagousset 2004 - no data available for provider group (self = 0/120) | Alam 2013 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data | - | Dagousset 2004 : missing/not included because we did not have data on the provider group |

**Table 1. Other data** *(Continued)*

| | | | | |
|---|---|---|---|---|
| | | Alam 2018: disaggregated data by group from trialist | | |
| **Contact with health services** | | | | |
| Called clinic/hotline | Dagousset 2004 - no denominators available for either group (self = 0/?, provider = 0/?) | Alam 2013: disaggregated data by group from trialist | - | Dagousset 2004; Elul 2001 - Tunisia; Provansal 2009 : missing/not included because we did not have the total number of women in each group |
| | Provansal 2009 - no denominators available for either group (self = 5/?, 7/?) | Alam 2018: disaggregated data by group from trialist | | |
| | Elul 2001 - Tunisia - no denominators available (self = 27/?, provider = 8/?) | Okonufua 2014 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data | | |
| Unscheduled clinic visits | Elul 2001 - Tunisia - no denominator for provider group (self = 13/166, provider = 6/?) | Alam 2013: disaggregated data by group from trialist | - | Elul 2001 - Tunisia : missing/not included because we did not have data on the provider group |
| | Provansal 2009 - no denominators available for either group (self = 5/?, 5/?) | Alam 2018: disaggregated data by group from trialist | | Provansal 2009 : missing/not included because we did not have the total number of women in each group |
| | - | Okonufua 2014 - disaggregated data by group from trialist and denominators were calculated by review authors using numerators and percent data | | - |
| **Companionship (*self-administered group only*)** | | | | |
| Total accompanied in home group; by whom | - | Okonufua 2014 - unpublished data received from trialist | - | Dagousset 2004; Provansal 2009 : only overall accompanied reported |
| | | Alam 2013 - unpublished data received from trialist and review authors calculated denominators using numerators and percent data | | |
| | | Alam 2018 - unpublished data received from trialist and review authors calculated denominators using numerators and percent data | | |

**Table 1. Other data** *(Continued)*

| | | | | |
|---|---|---|---|---|
| | | Provansal 2009 - only overall data published in Ngo 2011<br><br>Shuchita 2008 - review authors calculated numerators using denominator and percents provided | | |
| **Best and worst features** | | | | |
| Best features | Shuchita 2008 (secret, more confidential) - only self group and overall data reported (no provider) | Alam 2018 - unpublished data received from trialist and review authors calculated denominators using numerators and percents provided | Akin 2004 - only percents per group reported | Akin 2004 : not estimatable because only percents reported per group<br><br>Ngoc 2004 : only overall data available<br><br>Shuchita 2008 : one feature omitted because we did not have data on the provider group |
| Worst features | Alam 2013 (fear, anxiety) - only numerator of self group provided (missing denominator) | Alam 2018 - unpublished data received from trialist and review authors calculated denominators using numerators and percents provided | Akin 2004 - only percents per group reported | Ngoc 2004 : only overall data available<br><br>Akin 2004 : not estimatable because only percents reported per group<br><br>Alam 2013 : one feature omitted because we did not have the total number of women in each group<br><br>Bracken 2006; Shuchita 2008 : one feature omitted because we did not have data on the provider group |
| | Shuchita 2008 (fear, anxiety; none, no reason given) - only self group and overall data reported (no provider) | - | - | - |
| | Bracken 2006 (procedure takes too long/too many visits) - only self group data provided (no provider group or overall) | | | |

**Table 2. Medical abortion intervention and drug regimen**

| Study | MA location (including by choice or randomization) | Intervention | Drug(s) | Dosage | Time in between doses | Route | Pain medication provided (yes/no) | Additional misoprostol offered (yes/no) | Success rate by additional dose(s) of misoprostol |
|---|---|---|---|---|---|---|---|---|---|
| Akin 2004 | mife in clinic; miso in clinic or at home (choice) | 200 mg mife in clinic + 400 µg oral miso 2 days later either a) in clinic or b) at home + paracetamol or paracetamol plus codeine | mife + miso | 200 mg [400 µg] | 2 days | oral (oral) | Yes | No | n/a |
| Alam 2013 | mife in clinic; miso in clinic or at home (choice) | 200 mg mife in clinic + 800 µg buccal miso 2 days later either a) in clinic or b) at home + 2 x 500 mg paracetamol tablets if needed | mife + miso | 200 mg (800 µg) (800 µg) | 24 hours (10+ days) | oral (buccal) (buccal) | Yes | Yes. 20 women were given a second follow-up visit after the provider identified debris in the uterus at their first follow-up. An additional 800 mcg buccal dose of misoprostol was provided for "most" of these women. Almost all women who received the additional medication had a success- | Success rate not reported (NR). |

**Table 2. Medical abortion intervention and drug regimen** *(Continued)*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | ful procedure. p 82 | |
| Alam 2018 | mife in clinic; miso in clinic or at home (choice) | 200 mg mife in clinic + 800 µg buccal miso 1 day later either a) in clinic or b) at home + mild analgesic (1 x 400 mg ibuprofen) | mife + miso | 200 mg (800 µg) | 24 hours (10 - 14+ days) | oral (buccal) | Yes | Yes | NR |
| Bracken 2006 | mife in clinic; miso in clinic or at home (choice) | 200 mg mife in clinic + 400 µg oral miso 2 days later either a) in clinic or b) at home + 200 mg ibuprofen as needed | mife + miso | 200 mg (400 µg) | 2 days | oral (oral) | Yes | No | n/a |
| Bracken 2010 | mife in clinic; miso in clinic or at home (choice) | 200 mg mife in clinic + 400 µg oral miso 2 days later either a) in clinic or b) at home + 4 x 500 mg paracetamol tablets and advised could obtain 330 mg paracetamol with 20 mg codeine if needed | mife + miso | 200 mg (400 µg) | 2 days | oral (oral) | Yes | No | n/a |
| Dagousset 2004 | mife in clinic; miso in clinic or at home (choice) | 600 mg oral mife in hospital + 400 µg oral miso either in hospital or at home, + analgestic prescription. Additional oral miso 400 µg was offered in clinic in case of non-expulsion within 3 hours after the first dose | mife + miso | Self: 600 mg (400 µg) Provider: 600 mg (400 µg) (400 µg) | Time between mife and miso NR (3 hrs) | oral (oral) | Yes | Yes | NR |
| Elul 2001 - Tunisia; Elul 2001 - Vietnam | mife in clinic; miso in clinic or at home (choice) | 200 mg mife in clinic + 400 µg oral miso 48 hours later either a) at home or b) in clinic + 500 mg paracetamol | mife + miso | 200 mg (400 µg ) | self: 48 hours; provider: 72 hours | oral (oral) | Yes | no | n/a |
| Hajri 2004 | mife in clinic; miso in clinic or at home (choice) | 200 mg oral mife in clinic + 400 µg oral miso 2 days later either a) at home or b) in study clinic + paracetamol or paracetamol with codeine | mife + miso | 200 µg (400 µg) | 2 days | oral (oral) | Yes | No | n/a |
| Iyengar 2016 | mife in clinic; miso in clinic or at home (choice) | 200 mg oral mife in clinic + 400 µg miso [route differed across clinics by their standard protocols -sublingual 55%; vaginal 17%; oral 28%) 2 days later either a) at home or b) in study clinic + analgesics as needed. If bleeding did not start in 4 hours after miso, an addition- | mife + miso | 200 mg (800 µg) (400 µg) | 2 days (4 hours) | self: oral provider: oral (sublingual/ vaginal/ or oral) (depending on clinic) | Yes | Yes | NR |

**Table 2. Medical abortion intervention and drug regimen** *(Continued)*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | al dose of 400 µg of miso was administered. | | | | | | | |
| Karki 2009 | mife in clinic; miso in clinic or at home (choice) | 200 mg oral mife in clinic + 400 µg oral miso 2 days later either a) at home or b) at the clinic + 500 mg paracetamol | mife + miso | 200 mg [400 µg] | 2 days | oral (oral) | Yes | No | n/a |
| Li 2017 | mife in clinic; miso in clinic or at home (randomized) | 75 mg oral mife at the initial hospital visit followed by 400 µg oral miso 24 hours later either a) in the hospital or b) by self-administration | mife + miso | 75 mg (400 µg) | 24 hours | oral (oral) | NR | No | n/a |
| Ngoc 2004 | mife in clinic; miso in clinic or at home (choice) | 200 mg oral mife in clinic followed by 400 µg oral miso 2 days later either a) in clinic or b) at home + 8x500 mg paracetamol to take as needed | mife + miso | 200 mg (400 µg) | 2 days | oral (oral) | Yes | No | n/a |
| Okonufua 2014 | mife in clinic; miso in clinic or at home (choice) | 200 mg oral mife in clinic followed by 400 µg oral miso 2 days later either a) in clinic b) or at home + 4x500mg paracetamol to take as needed | mife + miso | 200 mg (400 µg) | 2 days | oral (oral) | Yes | No | n/a |
| Provansal 2009 | mife in clinic; miso in clinic or at home (choice) | 600 mg oral mife in clinic followed by 400 µg oral miso 36 to 48 hours later either a) in clinic b) or at home | mife + miso | 600 mg (400 µg) | 36 - 48 hours | oral (oral) | NR | Yes | NR |
| Raghavan 2012 | mife in clinic; miso in clinic or at home (choice) | 200 mg mife in clinic + 400 µg oral miso 2 days later either a) in clinic or b) at home + paracetamol or paracetamol plus codeine as needed | mife + miso | 200 mg (400 µg) | 2 days | oral (oral) | Yes | Yes | NR |
| Shrestha 2014 | mife in clinic; miso in clinic or at home (randomized) | 200 mg oral mife in hospital followed by 800 µg vaginal miso 24 hours later either a) in hospital or b) at home + 100 mg nimesulide (analgesic) at time of misoprostol insertion | mife + miso | 200 mg (800 µg) | 24 hours | oral (vaginal) | Yes | Yes | Yes. Success rate reported: 18 women with incomplete abortion received 2nd dose misoprostol in which 11 |

**Table 2. Medical abortion intervention and drug regimen** *(Continued)*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | (61.1%) (4 in provider group, and 7 in self group) had successful termination in next 1 week follow-up, and the remaining 7 had surgical evacuation. p 187 |
| Shuchita 2008 | mife in clinic; miso in clinic or at home (choice) | 200 mg oral mife in hospital followed by 400 µg sublingual miso 2 days later either a) in hospital or b) at home + 4x500 mg paracetamol to take as needed | mife + miso | 200 mg (400 µg) | 2 days | oral (sublingual) | Yes | No | n/a |

NR: not reported

**Table 3. Risk of bias assessment (RCTs): all outcomes**

| | Random sequence generation | Allocation concealment | Blinding of personnel and participants | Blinding of outcome assessors | Incomplete outcome data | Selective outcome reporting | Overall |
|---|---|---|---|---|---|---|---|
| **Li 2017** | x | x | · · | · · · | · · | x | · · · |
| **Shrestha 2014** | · · | x | · · | · · · | · · | x | · · · |

x unclear; · · low; · · · high
Li 2017 and Shrestha 2014 did not report on complications requiring surgical intervention, so this outcome is not assessed in this table

**Table 4. Risk of bias assessment (NRS): all outcomes**

| | Confounding | Selection of participants into study | Classification of interventions | Deviations from intended interventions | Missing data | Measurement of outcomes | Selection of reported results | Overall bias |
|---|---|---|---|---|---|---|---|---|
| Akin 2004[b] | ··· | ·· | ·· | · | · | ··· | ·· | ··· |
| Alam 2013[ab] | ••• | ·· | ·· | · | •• | ··· | ·· | ··· |
| **Alam 2018** | ••• | ·· | ·· | ·· | •• | ··· | ·· | ··· |
| Bracken 2006[b] | ••• | ·· | ·· | · | •• | ··· | ·· | ··· |
| Bracken 2010[b] | ••• | ·· | ·· | · | •• | ··· | ·· | ··· |
| **Dagousset 2004** | ••• | ·· | ·· | · | • | ··· | ·· | ··· |
| Elul 2001 - Tunisia[ab] | ••• | ·· | ·· | · | •• | ··· | ·· | ··· |
| Elul 2001 - Vietnam[ab] | ••• | ·· | ·· | · | •• | ··· | ·· | ··· |
| Hajri 2004[b] | ••• | ·· | ·· | · | •• | ··· | ·· | ··· |
| Iyengar 2016[b] | ••• | ·· | ·· | · | •• | ··· | ·· | ··· |
| Karki 2009[b] | ••• | ·· | ·· | · | •• | ··· | ·· | ··· |
| Ngoc 2004[b] | •• | ·· | ·· | · | •• | ··· | ·· | ··· |
| Okonufua 2014[**ab**] | ••• | ·· | ·· | · | •• | ··· | ·· | ··· |
| **Provansal 2009** | ••• | ·· | ·· | · | ••• | ··· | ·· | ··· |
| Raghavan 2012[ab] | ••• | ·· | ·· | · | •• | ··· | ·· | ··· |
| Shuchita 2008[b] | ••• | ·· | ·· | · | • | ··· | ·· | ··· |

· low; ·· moderate; ··· serious; ···· critical

[a] Did not report on ongoing pregnancy, so this outcome is not assessed in this table for these studies.

[b] Did not report on complications requiring surgical intervention, so this outcome is not assessed in this table for these studies.

**Table 5. Baseline characteristics**

| Study ID | % Married (n/N) | % Primigravida (n/N) | % First Abortion (n/N) | Education (mean years ± SD) | Age (mean years ± SD) | Gestational age (mean weeks ± SD) |
|---|---|---|---|---|---|---|
| Akin 2004 | Self: 29.5<br>Provider: 29.7<br>Overall: 29.60 | Self: 0 (0/104)<br>Provider: 2.9 (3/104)<br>Overall: 1.4 (3/208) | Self: 56.7 (69/104)<br>Provider: 59.6 (62/104)<br>Overall: 58.2 (121/208) | Self: 9.0<br>Provider: 8.0<br>Overall: 8.5 | Self: 29.5<br>Provider: 29.7<br>Overall: 29.6 (range: 18-45) | Self: 6.17<br>Provider: 6.21<br>Overall: 6.2 |
| Alam 2013 | Self: 99.44 (537/540)<br>Provider: 100 (111/111)<br>Overall: 99.5 (648/651) | Self: 23.52 (127/540)<br>Provider: 21.62 (24/111)<br>Overall: 23.2 (151/651) | NR | Self: 10.3<br>Provider: 8.9<br>Overall: 10.1 ± 4.7 | Self: 26.7<br>Provider: 24.32 (27/111)<br>Overall: 26.8 Range (17-45) | NR (see GA categorically reported) |
| Alam 2018 | Self: 99.4% (1610/1619)<br>Provider: 97.6 (122/125)<br>Overall: 99.3 (1732/1744) | Self: 10.6 (172/1619)<br>Provider: 11.2 (14/125)<br>Overall: 10.7 (186/1744) | NR | Self: 7.2 ± 4.0<br>Provider: 5.9 ±4.3<br>Overall: 7.1 ±4.0 | Self: 27.9 ± 5.7<br>Provider: 27.7 ± 5.6<br>Overall: 27.9 ± 5.7 (Range 18-49) | reported by GA cat |
| Bracken 2006 | Self: 72.0 (260/361)<br>Provider: 75.0 (36/48)<br>Overall: 72.4 (296/409)<br>P = 0.726 | Self: 21 (76/361)<br>Provider: 16.7 (8/48)<br>Overall: 20.50 (84/409)<br>P = 0.571 | Self: 45.7 (165/361);<br>Provider: 33.3 (16/48);<br>Overall:44.3 (181/409)<br>P = 0.123 | NR | Self: 29.2 (6.7)<br>Provider: 29.5 (6.1)<br>Overall: 29.3 (6.2)<br>P = 0.799 | Self: 42.3 ± 6.43<br>Self: 43.2 ± 5.8<br>Overall: 42.4 ± 6.3<br>P = 0.379 |
| Bracken 2010 | NR | Self: 17.5 (93/530)<br>Provider: 18.8 (13/69)<br>Overall: 17.70 (106/599) | Self: 68.3 (362/530)<br>Provider:48/69 (69.6)<br>Overall: 68.4 (410/599) | NR | Self: 26.8 ± 4.8<br>Provider: 25.2 ± 4.6<br>All: 26.7 ± 4.8<br>P = 0.008 | DAYS<br>Self: 44.3 ± 5.5<br>Provider: 45.4 ± 5.9<br>Overall: 44.5 ± 5.4<br>(n/598) |
| Dagousset 2004 | NR | NR | Self: 69.2 (83/120)<br>Provider: 68.83 (199/289) | greater than or equal to Bac:<br>Self = 85% | Age RANGE 26-35 years (see categorically by group) | NR |

**Table 5. Baseline characteristics** *(Continued)*

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Overall: 68.95 (282/409) | Provider = 66.5% | | |
| **Elul 2001 - Tunisia; Elul 2001 - Vietnam** | NR | Tunisia overall: 5 (10/195)<br>Vietnam overall: 50 (60/120) | Tunisia overall: 54.9 (107/195)<br>Vietnam overall: 61.7 (74/120) | Tunisia overall: 9.2 ± 4.7<br>Vietnam overall: 10.3 ± 3.4 | Vietnam overall: 24.7 ± 4.0<br>Tunisia overall: 32.2 ± 5.5 | Vietnam overall: 6.2 ± 0.6<br>Tunisia overall: 6.2 ± 0.9 |
| **Hajri 2004** | Self: 80.1 (191/241)<br>Provider: 76.8 (63/82)<br>Overall:78.64 (254/323) | NR | Self: 55.6 (134/241)<br>Provider: 47.56 (39/82)<br>Overall: 53.56 (173/323) | Self: 11.6<br>Provider: 10.2<br>Overall: NR<br>P = 0.02 | Self: 30.9<br>Provider: 29.7<br>Overall: 27 (range 17-49) | DAYS<br>Self: 44.2<br>Provider: 44.8<br>Overall: 44 |
| **Iyengar 2016** | NR | NR | Self: 66.96 (229/342)<br>Provider: 68.12 (265/389)<br>Overall: 67.6 (494/731) | NR | Self: 26.6 ± 4.7<br>Provider: 27.5 ± 4.9<br>Overall: NR<br>P = 0.016 | Self: 5.95<br>Provider: 7.15<br>Overall: NR<br>P = 0.000 |
| **Karki 2009** | NR | Self: 18.6 (60/323)<br>Provider: 13.0 (10/77)<br>Overall: 17.5 (70/400) | Overall: 73.62 (293/398) | MEDIAN AND RANGE:<br>Self: 10 (0-25)<br>Provider: 9 (0-17)<br>Overall: 10 (0-25) | MEDIAN AND RANGE:<br>Self: 27 (17-49)<br>Provider: 28 (19-46)<br>Overall: 27 range (17-49) | MEDIAN AND RANGE: DAYS.<br>Self: 44 (30-56)<br>Provider: 46 (36-56)<br>Overall:44 (30-56) |
| **Li 2017** | NR | NR | NR | NR | Self = 27.1 ± 6.3<br>Provider: 26.8 ± 4.9<br>Overall: NR | Self: 32.1 ± 3.2<br>Provider: 32.4 ± 2.7<br>Overall: NR |
| **Ngoc 2004** | Self: 89.5 (1244/1390)<br>Provider: 90.8 (158/174)<br>Overall: 89.6 (1402/1564) | Self: 9.0 (125/1390)<br>Provider: 16.7 (29/174)<br>Overall: 9.8 (154/1564)<br>P = 0.001 | Self: 47.7 (663/1390)<br>Provider: 51.10 (89/174)<br>Overall: 48.10 (752/1564) | Self: 11.1<br>Provider: 8.7<br>Overall: 10.9<br>P = 0.001 | RANGE<br>Self: 29.8 (18-48)<br>Provider: 28.3 (19-47)<br>Overall: 29.7 (18-48) | Self: 42.2<br>Provider: 43.7<br>Overall: 42.4<br>P = 0.001 |
| **Okonufua 2014** | NR | Self: 26<br>Provider: 11.5 | Self: 51.4<br>Provider: 42.8 | Self: 12.6 ± 4.2 | Self: 24.0 ± 4.2<br>Provider: 25.6 ± 5.5 | Self: 6.5 ± 1.3<br>Provider: 7.2 ± 1.6 |

**Table 5. Baseline characteristics** *(Continued)*

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Overall: 23.5<br>P = 0.13<br>(n/170) | Overall: 50<br>P = 0.77<br>(n/101) | Provider: 11.9 ± 5.1<br>Overall: 12.5±4.3<br>P = 0.56<br>(n/178) | Overall: 24.3±4.5<br>P = 0.09<br>(n/220) | Overall: 6.6±1.3<br>P = 0.03<br>(n/210) |
| **Provansal 2009** | NR | NR | NR | NR | Self: 28.2 ± 6.5<br>Provider: 25.9 ± 6.4<br>Overall NR<br>P = 0.001 | "gesite"<br>Self: 3.4 ± 2.4<br>Provider: 2.3 ± 1.6<br>Overall NR<br>P = 0.001 |
| **Raghavan 2012** | NR | NR | NR | NR | Overall: 27.5 ± 5.9 | Overall: 41.0 ± 5.4 |
| **Shrestha 2014** | Self: 100 (92/92)<br>Provider: 97.8 (90/92)<br>Overall: 98.9 (182/184)<br>P = 0.25 | Self: 15.2 (14/92)<br>Provider: 10.9 (10/92)<br>Overall: 13 (24/184) | NR | NR | Self: 27.4 ± 4.9<br>Provider: 27.3 ± 5<br>Overall NR<br>P = 0.8 | DAYS<br>Self: 45.4 ± 7<br>Provider: 44.4 ± 7.6<br>Overall NR<br>P = 0.3 |
| **Shuchita 2008** | NR | NR | Self: 88.4 (69/78)<br>Provider: 81 (17/21)<br>Overall: 86.8 (86/99) | Self: 11.5 ± 3<br>Provider: 11.5 ± 3<br>Overall: 11.6 ± 3.1 | Self: 26.6 ± 4.1<br>Provider: 26.5 ± 4.5<br>Overall: 26.6 ± 4.2 | Self: 6.6 ± 0.7 (0.7 assumed by review authors and that 6.7 in text is typo)<br>Provider: NR<br>Overall: 6.6 ± 0.7 |

**Table 6. Akin 2004**

| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate |
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |
| **Deviations from intended intervention** | All outcomes: Low: no apparent deviations from intended interventions |

**Table 6. Akin 2004** *(Continued)*

| | |
|---|---|
| **Missing data** | All outcomes: Low: ITT analysis; data were reasonably complete |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 7. Alam 2013**

| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Serious: no blinding of intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: 3.4% loss to follow-up overall |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 8. Alam 2018**

| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Moderate: deviation from the protocol but impact on the intervention are expected to be slight given only 2.1% of women sought this additional care |
| **Missing data** | All outcomes: Moderate: very little missing data |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |

**Table 8. Alam 2018** *(Continued)*

| | |
|---|---|
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 9. Bracken 2006**

| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention & outcome |
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: per protocol |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 10. Bracken 2010**

| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Serious: at least one domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: per protocol |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 11. Dagousset 2004**

| Risk of bias | Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Low: ITT analysis; data was reasonably complete |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 12. Elul 2001 - Tunisia**

| Risk of bias | Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: per protocol |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 13. Elul 2001 - Vietnam**

| Risk of bias | Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA |
|---|---|

**Table 13. Elul 2001 - Vietnam** *(Continued)*

| | |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: No apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: per protocol |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 14. Hajri 2004**

| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: per protocol |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 15. Iyengar 2016**

| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |

**Table 15. Iyengar 2016** *(Continued)*

| | |
|---|---|
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: per protocol |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan. There is no indication of selection of the reported analysis from among multiple analyses |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 16. Karki 2009**

| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: per protocol |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 17. Ngoc 2004**

| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Moderate: confounding domain appropriately measured and controlled for and sufficient reliability and validity of measurement of domain |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Low: impossible to blind intervention status for participants or clinicians |

**Table 17. Ngoc 2004** *(Continued)*

| | |
|---|---|
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: per protocol |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 18. Okonofua 2014**

| | |
|---|---|
| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Serious: no blinding of intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: per protocol |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 19. Provansal 2009**

| | |
|---|---|
| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Serious: no blinding of intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |

**Table 19. Provansal 2009** *(Continued)*

| | |
|---|---|
| **Missing data** | All outcomes: Serious: per protocol and outcome data were not available for over 20% of the participants |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: 2 domains judged to be at serious risk of bias (bias of measurement of outcomes and bias due to missing data) |

**Table 20. Raghavan 2012**

| **Risk of bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Serious: no blinding of intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Moderate: per protocol |
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 21. Shuchita 2008**

| **Risk of Bias** | **Outcomes: ongoing pregnancy, complications requiring surgical intervention, success of MA** |
|---|---|
| **Confounding** | All outcomes: Serious: at least 1 domain was not measured or not controlled for |
| **Selection of participants into the study** | All outcomes: Moderate: possibility that follow-up and start of intervention did not coincide AND selection into study may have been related to intervention and outcome |
| **Classification of interventions** | All outcomes: Serious: no blinding of intervention status for participants or clinicians |
| **Deviations from intended interventions** | All outcomes: Low: no apparent deviations from intended interventions |
| **Missing data** | All outcomes: Low: ITT analysis; data were reasonably complete |

**Table 21. Shuchita 2008** *(Continued)*

| | |
|---|---|
| **Measurement of outcomes** | All outcomes: Serious: outcome was assessed by assessors aware of intervention |
| **Selection of the reported result** | All outcomes: Moderate: no clear evidence from protocol or statistical analysis plan |
| **Overall bias** | All outcomes: Serious: at least 1 domain judged to be at serious risk of bias |

**Table 22. Best Features of Medical Abortion**

**Easy and quick**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Akin 2004 | NR | NR | 16% | NR | NR | 15% | NR | NR |
| Alam 2013 | 295 | 629 | 46.90% | 49 | 629 | 7.79% | 344/629 | 54.69% |
| Alam 2018 | 769 | 1617 | 47.56% | 56 | 121 | 46.28% | 825/1738 | 47.47% |
| Bracken 2006 | 233 | 339 | 68.73% | 35 | 47 | 74.47% | 268/376 | 71.28% |
| Hajri 2004 | 148 | 221 | 66.97% | 29 | 77 | 37.66% | 177/298 | 59.40% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 811/1545 | 52.49% |
| Shuchita 2008 | 11 | 75 | 14.67% | 2 | 23 | 8.70% | 13/98 | 13.27% |
| Overall | 1456 | 2881 | 50.54% | 171 | 897 | 19.06% | 2438/4684 | 52.05% |

**Perceived less pain**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Akin 2004 | NR | NR | 40% | NR | NR | 52% | NR | NR |
| Alam 2013 | 28 | 629 | 4.45% | 8 | 629 | 1.27% | 36/629 | 5.72% |
| Alam 2018 | 219 | 1617 | 13.54% | 20 | 121 | 16.53% | 239/1738 | 13.75% |
| Bracken 2006 | 65 | 339 | 19.17% | 2 | 47 | 4.26% | 67/376 | 17.82% |
| Hajri 2004 | 21 | 221 | 9.50% | 7 | 77 | 9.09% | 28/298 | 9.40% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 518/1545 | 33.53% |

**Table 22. Best Features of Medical Abortion** *(Continued)*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Shuchita 2008 | 3 | 75 | 4.00% | 1 | 23 | 4.35% | 4/98 | 4.08% |
| Overall | 336 | 2881 | 11.66% | 38 | 897 | 4.24% | 892/4684 | 19.04% |

**Perceived as safer, healthier**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Bracken 2006 | 66 | 339 | 19.47% | 11 | 47 | 23.40% | 77/376 | 20.48% |
| Hajri 2004 | 41 | 221 | 18.55% | 18 | 77 | 23.38% | 59/298 | 19.80% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 220/1545 | 14.24% |
| Overall | 107 | 560 | 19.11% | 29 | 124 | 23.39% | 356/2219 | 16.04% |

**Secret, more confidential**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Alam 2013 | 50 | 629 | 7.95% | 27 | 629 | 4.29% | 77/629 | 12.24% |
| Alam 2018 | 156 | 1617 | 9.65% | 13 | 121 | 10.74% | 169/1738 | 9.72% |
| Bracken 2006 | 132 | 339 | 38.94% | 16 | 47 | 34.04% | 148/376 | 39.36% |
| Hajri 2004 | 22 | 221 | 9.95% | 8 | 77 | 10.39% | 30/298 | 10.07% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 203/1545 | 13.14% |
| Shuchita 2008 | 4 | 75 | 5.33% | 0 | 0 | 0% | 4/98 | 4.08% |
| Overall | 364 | 2881 | 12.63% | 64 | 874 | 7.32% | 631/4684 | 13.47% |

**Table 22. Best Features of Medical Abortion** *(Continued)*

| **Less anxiety, fear, worries** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Self** | | | **Provider** | | | **Overall** | |
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | | |
| Bracken 2006 | 16 | 339 | 4.72% | 2 | 47 | 4.26% | 18/376 | 4.79% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 81/1545 | 5.24% |
| Overall | 16 | 339 | 4.72% | 2 | 47 | 4.26% | 99/1921 | 5.15% |

| **Method is non-invasive** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Self** | | | **Provider** | | | **Overall** | |
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Akin 2004 | NR | NR | 45% | NR | NR | 32% | NR | NR |
| Alam 2013 | 332 | 629 | 52.78% | 70 | 629 | 11.13% | 402/629 | 63.91% |
| Alam 2018 | 898 | 1617 | 55.53% | 44 | 121 | 36.36% | 942/1738 | 54.20% |
| Bracken 2006 | 44 | 339 | 12.98% | 13 | 47 | 27.66% | 57/376 | 15.16% |
| Hajri 2004 | 41 | 221 | 18.55% | 16 | 77 | 20.78% | 57/298 | 19.13% |
| Shuchita 2008 | 30 | 75 | 40.00% | 13 | 23 | 56.52% | 43/98 | 43.88% |
| Overall | 1345 | 2881 | 46.69% | 156 | 897 | 17.39% | 1501/3139 | 47.82% |

| **Stay at home, avoid the clinic** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Self** | | | **Provider** | | | **Overall** | |

**Table 22. Best Features of Medical Abortion** *(Continued)*

| Study | n | N | % | n | N | % | n/N | % |
|---|---|---|---|---|---|---|---|---|
| Akin 2004 | NR | NR | 20% | NR | NR | 2% | NR | NR |
| Alam 2018 | 291 | 1617 | 18.00% | 21 | 121 | 17.36% | 312/1738 | 17.95% |
| Shuchita 2008 | 11 | 75 | 14.67% | 6 | 23 | 26.09% | 17/98 | 17.35% |
| Overall | 302 | 1692 | 17.85% | 27 | 144 | 18.75% | 329/1836 | 17.92% |

**More natural, similar to menstruation**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Akin 2004 | NR | NR | 5% | NR | NR | 17% | NR | NR |
| Hajri 2004 | 18 | 221 | 8.14% | 8 | 77 | 10.39% | 26/298 | 8.72% |
| Overall | 18 | 221 | 8.14% | 8 | 77 | 10.39% | 26/298 | 8.72% |

**None**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Alam 2013 | 22 | 629 | 3.50% | 4 | 629 | 0.64% | 26/629 | 4.13% |
| Alam 2018 | 30 | 1617 | 1.86% | 5 | 121 | 4.13% | 35/1738 | 2.01% |
| Bracken 2006 | 9 | 339 | 2.65% | 0 | 47 | 0% | 9/376 | 2.39% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 144/1545 | 9.32% |
| Overall | 61 | 2585 | 2.36% | 9 | 797 | 1.13% | 214/4288 | 4.99% |

**Table 23. Worst Features of Medical Abortion**

**Fear, anxiety**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Alam 2013 | 111 | NR | NR | 55 | 629 | 8.74% | 166/629 | 26.39% |
| Alam 2018 | 221 | 1617 | 13.67% | 13 | 121 | 10.74% | 234/1738 | 13.46% |
| Bracken 2006 | 33 | 352 | 9.38% | 3 | 47 | 6.38% | 36/399 | 9.02% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 98/1554 | 6.31% |
| Shuchita 2008 | 6 | 75 | 8.00% | 0 | 0 | 0% | 6/98 | 6.12% |
| Overall | 371 | n/a | n/a | 71 | 797 | 8.91% | 540/4418 | 12.22% |

**None, no reason given**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Akin 2004 | NR | NR | 42% | NR | NR | 28% | NR | NR |
| Alam 2013 | 103 | 629 | 16.38% | 23 | 629 | 3.66% | 126/629 | 20.03% |
| Alam 2018 | 291 | 1617 | 18.00% | 23 | 121 | 19.01% | 314/1738 | 18.07% |
| Bracken 2006 | 132 | 352 | 37.50% | 18 | 47 | 38.30% | 150/399 | 37.59% |
| Hajri 2004 | 72 | 221 | 32.58% | 31 | 77 | 40.26% | 103/298 | 34.56% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 419/1554 | 26.96% |
| Shuchita 2008 | 4 | 75 | 5.33% | 0 | 0 | 0% | 4/98 | 4.08% |

**Table 23. Worst Features of Medical Abortion** *(Continued)*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Overall | 602 | 2894 | 20.80% | 95 | 874 | 10.87% | 1116/4716 | 23.66% |

**Bleeding**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Akin 2004 | NR | NR | 24% | NR | NR | 25% | NR | NR |
| Alam 2013 | 124 | 629 | 19.71% | 20 | 629 | 3.18% | 144/629 | 22.89% |
| Alam 2018 | 341 | 1617 | 21.09% | 14 | 121 | 11.57% | 355/1738 | 20.43% |
| Bracken 2006 | 109 | 352 | 30.97% | 18 | 47 | 38.30% | 127/399 | 31.83% |
| Hajri 2004 | 65 | 221 | 29.41% | 24 | 77 | 31.17% | 89/298 | 29.87% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 786/1554 | 50.58% |
| Shuchita 2008 | 13 | 75 | 17.33% | 2 | 23 | 8.70% | 15/98 | 15.31% |
| Overall | 652 | 2894 | 22.53% | 78 | 897 | 8.70% | 1516/4716 | 32.15% |

**Pain and cramps**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Akin 2004 | NR | NR | 19% | NR | NR | 16% | NR | NR |
| Alam 2013 | 238 | 629 | 37.84% | 36 | 629 | 5.72% | 274/629 | 43.56% |
| Alam 2018 | 1059 | 1617 | 65.49% | 78 | 121 | 64.46% | 1137/1738 | 65.42% |
| Bracken 2006 | 53 | 352 | 15.06% | 14 | 47 | 29.79% | 67/399 | 16.79% |

**Table 23. Worst Features of Medical Abortion** *(Continued)*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Hajri 2004 | 59 | 221 | 26.70% | 17 | 77 | 22.08% | 76/298 | 25.50% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 300/1554 | 19.31% |
| Shuchita 2008 | 35 | 75 | 46.67% | 13 | 23 | 56.52% | 48/98 | 48.98% |
| Overall | 1444 | 2894 | 49.90% | 158 | 897 | 17.61% | 1902/4716 | 40.33% |

**Fatigue**

| | **Self** | | | **Provider** | | | **Overall** | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Bracken 2006 | 29 | 352 | 8.24% | 1 | 47 | 2.13% | 30/399 | 7.52% |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 207/1554 | 13.32% |
| Overall | 29 | 352 | 8.24% | 1 | 47 | 2.13% | 237/1953 | 12.14% |

**Procedure takes too long/too many visits**

| | **Self** | | | **Provider** | | | **Overall** | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Akin 2004 | NR | NR | 2% | NR | NR | 11% | NR | NR |
| Alam 2013 | 47 | 629 | 7.47% | 12 | 629 | 1.91% | 59/629 | 9.38% |
| Bracken 2006 | 25 | 352 | 7.10% | NR | NR | NR | NR | NR |
| Ngoc 2004 | NR | NR | NR | NR | NR | NR | 112/1554 | 7.21% |
| Overall | 72 | 981 | 7.34% | 12 | 629 | 1.91% | 171/2183 | 7.83% |

**Table 23. Worst Features of Medical Abortion** *(Continued)*

**Waiting for completion**

| | Self | | | Provider | | | Overall | |
|---|---|---|---|---|---|---|---|---|
| **Study** | **n** | **N** | **%** | **n** | **N** | **%** | **n/N** | **%** |
| Akin 2004 | NR | NR | 10% | NR | NR | 16% | NR | NR |
| Alam 2018 | 19 | 1617 | 1.18% | 0 | 121 | 0% | 19/1738 | 1.09% |
| Hajri 2004 | 54 | 221 | 24.43% | 9 | 77 | 11.69% | 63/298 | 21.14% |
| Overall | 73 | 1838 | 3.97% | 9 | 198 | 4.55% | 82/2036 | 4.03% |

# APPENDICES

## Appendix 1. Search Strategies

**EBM Reviews (Ovid) Cochrane Central Register of Controlled Trials (CENTRAL)**

1 exp Abortion, induced/ or Abortion, legal/ or Abortion, criminal/ or Abortion, septic/ or Abortion, therapeutic/ or Abortion applicants/ (1028)

2 (abortion* or ((medical* or trimester* or gestation* or pregnan*) adj5 terminat*) or "uterine evacuation*").tw. (4220)

3 or/1-2 (4320)

4 Abortifacient agents/ or Abortifacient agents, nonsteroidal/ or Abortifacient agents, steroidal/ or Mifepristone/ or Misoprostol/ (1878)

5 (Abortifacient* or Mifepristone* or Misoprostol* or RU486 or RU-486 or "abortion pill" or Cytotec or GyMiso or Korlym or Mifegyne or Mifeprex or

Misodel).tw. (3687)

6 or/4-5 (3834)

7 Self administration/ or Self medication/ or Nurse Midwives/ or Pharmacies/ or Physicians/ or exp Health personnel/ (8581)

8 (self* or herself or themselves or chemist or chemists or clinic or clinician* or drugstore* or "drug store*" or home or home-use or home-based or

midwife or midwives or nurse* or OTC or "over the counter" or pharmacies or pharmacist* or pharmacy* or physician* or provider*).tw. (202821)

9 or/7-8 (205526)

10 and/3,6,9 (225)

**MEDLINE (Ovid) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R)**

1 exp Abortion, induced/ or Abortion, legal/ or Abortion, criminal/ or Abortion, septic/ or Abortion, therapeutic/ or Abortion applicants/ (41255)

2 (abortion* or ((medical* or trimester* or gestation* or pregnan*) adj5 terminat*) or "uterine evacuation*").tw,kf. (70263)

3 or/1-2 (82705)

4 Abortifacient agents/ or Abortifacient agents, nonsteroidal/ or Abortifacient agents, steroidal/ or Mifepristone/ or Misoprostol/ (11382)

5 (Abortifacient* or Mifepristone* or Misoprostol* or RU486 or RU-486 or "abortion pill" or Cytotec or GyMiso or Korlym or Mifegyne or Mifeprex or

Misodel).tw,kf. (11883)

6 or/4-5 (15428)

7 Self administration/ or Self medication/ or exp Health Personnel/ or Nurse Midwives/ or Pharmacists/ or Pharmacies/ or Physicians/ (506541)

8 (self* or herself or themselves or chemist or chemists or clinic or clinician* or drugstore* or "drug store*" or home or home-use or home-based or

midwife or midwives or nurse* or OTC or "over the counter" or pharmacies or pharmacist* or pharmacy* or physician* or provider*).tw,kf. (2011189)

9 or/7-8 (2292192)

10 and/3,6,9 (1046)

**Embase (Ovid)**

1 illegal abortion/ or exp induced abortion/ or medical abortion/ or surgical abortion/ or legal abortion/ or second trimester abortion/ or therapeutic abortion/ (36275)

2 (abortion* or ((medical* or trimester* or gestation* or pregnan*) adj5 terminat*) or "uterine evacuation*").tw. (83292)

3 1 or 2 (95619)

4 exp abortive agent/ or mifepristone/ or misoprostol/ (164407)

5 (Abortifacient* or Mifepristone* or Misoprostol* or RU486 or RU-486 or "abortion pill" or Cytotec or GyMiso or Korlym or Mifegyneor Mifeprex or

Misodel).tw. (14585)

6 4 or 5 (165942)

7 exp drug self administration/ or exp self medication/ or exp nurse midwife/ or exp midwife/ or nurse midwifery/ or exp pharmacy/ or physician/ or health care personnel/ (165942)

8 (self* or herself or themselves or chemist or chemists or clinic or clinician* or drugstore* or "drug store*" or home or home-use or home-based or

midwife or midwives or nurse* or OTC or "over the counter" or pharmacies or pharmacist* or pharmacy* or physician* or provider*).tw. (2686060)

9 7 or 8 (3550721)

10 3 and 6 and 9 (1432)

11 Clinical Trial/ or Randomized Controlled Trial/ or exp randomization/ or Single Blind Procedure/ or Double Blind Procedure/ or Crossover Procedure/

Placebo/ or Prospective Study/ (2050421)

12 (randomi?ed controlled trial$ or RCT or random allocation or randomly or randomly allocated or allocated randomly or (allocated adj2 random) or

Single blind$ or Double blind$ or ((treble or triple) adj blind$) or placebo$).tw (290399)

13 or/11-12 (2093559)

14 Case Study/ or Abstract Report/ or Letter/ or case report.tw. (1555571)

15 13 not 14 (2042663)

16 10 and 15 (296)

**CINAHL Plus with Full Text (EBSCOHost)**

S26 S10 AND S25 (517)

S25 S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 (1,402,592)

S24 TX allocat* random* (967)

S23 (MH "Quantitative Studies") (22,889)

S22 (MH "Placebos") (11,359)

S21 TX placebo* (89,889)

S20 TX random* allocat* (11,567)

S19 (MH "Random Assignment") (55,495)

S18 TX randomi* control* trial* (205,476)

S17 TX ( (singl* n1 blind*) or (singl* n1 mask*) ) (18,217)

S16 TX ( (doubl* n1 blind*) or (doubl* n1 mask*) ) (1,025,957)

S15 TX ( (tripl* n1 blind*) or (tripl* n1 mask*) ) (598)

S14 TX ( (trebl* n1 blind*) or (trebl* n1 mask*) ) (9)

S13 TX clinic* n1 trial* (305,325)

S12 PT Clinical trial (86,808)

S11 (MH "Clinical Trials+") (262,246)

S10 S3 AND S6 AND S9 (1,108)

S9 S7 OR S8 (2,280,065)

S8 TX (self* OR herself OR themselves OR chemist OR chemists OR clinic OR clinician* OR drugstore* OR "drug store*" OR home OR home-use OR

home-based OR midwife OR midwives OR nurse* OR OTC OR "over the counter" OR pharmacies OR pharmacist* OR pharmacy* OR physician* OR

provider*) (2,145,562)

S7 MH ("Self Administration" OR "Self Medication" OR "Health Personnel+" OR "Nurse Midwives" OR "Pharmacists" OR "Pharmacy, Retail" OR

"Physicians") (505,790)

S6 S4 OR S5 (4,240)

S5 TX (Abortifacient* OR Mifepristone* OR Misoprostol* OR RU486 OR RU-486 OR "abortion pill" OR Cytotec OR GyMiso OR Korlym OR Mifegyne OR

Mifeprex OR Misodel) (4,240)

S4 MH ("Abortifacient Agents" OR "Mifepristone" OR "Misoprostol") (2,446)

S3 S1 OR S2 (29,370)

S2 TX (abortion* OR ((medical* OR trimester* OR gestation* OR pregnan*) N5 terminat*) OR "uterine evacuation*") (29,370)

S1 MH ("Abortion, Induced" OR "Abortion, Criminal") (9,165)

**LILACS**

("ABORTION" OR "applicant, ABORTION" OR "applicants, ABORTION" OR "center, ABORTION" OR "centers, ABORTION" OR "clinic, ABORTION" OR "clinics, ABORTION" OR "criminal ABORTION" OR "illegal ABORTION" OR "induced ABORTION" OR "legal ABORTION" OR "seeker, ABORTION" OR "seeker, refused ABORTION" OR "seeker, repeated ABORTION" OR "seekers, ABORTION" OR "seekers, refused ABORTION" OR "seekers, repeated ABORTION" OR "ABORTION (induced)" OR "porcine epidemic ABORTION and respiratory syndrome" OR "ABORTION applicant" OR "ABORTION applicants" OR "ABORTION center" OR "ABORTION centers" OR "ABORTION clinic" OR "ABORTION clinics" OR "ABORTION on demand" OR "refused ABORTION seeker" OR "repeated ABORTION seeker" OR "ABORTION seeker, refused" OR "ABORTION seeker, repeated" OR "ABORTION seekers" OR "refused ABORTION seekers" OR "repeated ABORTION seekers" OR "ABORTION seekers, refused" OR "ABORTION seekers, repeated" OR "ABORTION, criminal" OR "ABORTION, drug induced" OR "ABORTION, drug-induced" OR "ABORTION, illegal" OR "ABORTION, incomplete" OR "ABORTION, legal" or "MISOPROSTOL" or "MIFEPRISTONE" or "agents, ABORTIFACIENT" or "agents, non-steroidal ABORTIFACIENT" or "agents, nonsteroidal ABORTIFACIENT" or "agents, steroidal ABORTIFACIENT" or "ABORTIFACIENT agents" or "non-steroidal ABORTIFACIENT agents" or "nonsteroidal ABORTIFACIENT agents" or "steroidal ABORTIFACIENT agents" or "ABORTIFACIENT agents, non steroidal" or "ABORTIFACIENT agents, non-steroidal" or "ABORTIFACIENT agents, nonsteroidal" or "ABORTIFACIENT agents, steroidal" or "ABORTIFACIENTs" or "steroid ABORTIFACIENTs" or "ABORTIFACIENTs, steroid" [Subject descriptor] and "CLINICAL TRIAL" or "CONTROLLED CLINICAL TRIAL" or "RANDOMIZED CONTROLLED TRIAL" [Publication type] (17)

**POPLINE**

( ( ( Keyword vocabulary: ABORTION OR POSTABORTION OR POSTABORTION CARE ) ) OR ( ( abortion* OR medical terminat* OR termination of pregnanc* OR pregnancy terminat* OR gestation terminat* OR uterine evacuation* ) ) ) AND ( ( ( Keyword vocabulary: MISOPROSTOL ) ) OR ( ( Abortifacient* OR Mifepristone* OR Misoprostol* OR RU486 OR RU-486 OR abortion pill OR Cytotec OR GyMiso OR Korlym OR Mifegyne

OR Mifeprex OR Misodel ) ) ) AND ( ( ( Keyword vocabulary: SELF CARE OR HEALTH PERSONNEL OR NURSE-MIDWIVES OR PHARMACISTS OR PHARMACIES OR PHYSICIANS OR NURSES AND NURSING ) ) OR ( ( self* OR herself OR themselves OR chemist OR chemists OR clinic OR clinician* OR drugstore* OR drug store* OR home OR home-use OR home-based OR midwife OR midwives OR nurse* OR OTC OR over the counter OR pharmacies OR pharmacist* OR pharmacy* OR physician* OR provider* ) ) ) AND ( ( ( Keyword vocabulary: CLINICAL TRIALS ) ) AND ( ( clinical trial OR clinical trials OR controlled trial OR controlled trials OR random* OR single blind* OR double blind* OR treble blind* OR crossover OR placebo* OR RCT* OR allocat* ) ) ) (14)

**CLINICALTRIALS.GOV**

self* OR herself OR themselves OR chemist OR chemists OR clinic OR clinician* OR drugstore* OR home OR home-use OR home-based OR midwife OR midwives OR nurse* OR "over the counter" OR pharmacies OR pharmacist* OR physician OR provider* | Interventional Studies | abortion* OR pregnancy termination* OR termination* of pregnancy OR medical termination* OR uterine evacuation* (329)

**WHO ICTRP**

TITLE: self* OR herself OR themselves OR chemist OR chemists OR clinic OR clinician* OR drugstore* OR home OR home-use OR home-based OR midwife OR midwives OR nurse* OR OTC OR "over the counter" OR pharmacies OR pharmacist* OR pharmacy* OR physician* OR provider*

(AND) CONDITION: abortion* OR termination

(AND) INTERVENTION: abortifacient* OR misoprostol OR mifepristone OR Cytotec OR GyMiso OR Korlym OR Mifegyne OR Mifeprex OR Misodel

(AND) RECRUITMENT STATUS=ALL (71)

## Appendix 2. Data extraction template

**IDENTIFICATION**

| **Study Details** |
|---|
| Title |
| Country |
| Type of setting (low/high resource) |
| Urban vs rural |
| Type of clinic(s) (public vs private; other details) |

| **Corresponding author's contact details** |
|---|
| Corresponding author's name |
| First author (if different from corresponding author) |
| Institution |
| Email |
| Address |

| **Comments** |
|---|

**METHODS**

| **Design** |
|---|
| Prospective cohort study |
| Additional methods data |
| Aim of study |
| Clinic/provider administration description |
| Description of providers (type, training, etc) |
| Follow-up visits (time frame, etc) |
| Randomized into groups? |
| Record of experience (how women's MA experiences (side effects, etc) were recorded, i.e. self-report) |
| Self/home administration description |
| Self-selected into groups? |
| Use of pilot group prior to intervention grouping? |
| How was gestational age measured? |
| Painkiller used? |
| **Comments** |

**POPULATION**

| |
|---|
| Inclusion criteria |
| Exclusion criteria |
| Differences between groups at baseline? |
| Informed consent obtained? (yes, no, unclear) |
| Withdrawals? (describe) |

**Baseline characteristics**

| Characteristic | N | Self-admin"home users"n= | | Provider-admin "clinic users" n= | | Overall "all users" n= | |
|---|---|---|---|---|---|---|---|
| | P value or CI | mean or % | SD or n | mean or % | SD or n | mean or % | SD or n |
| **Age** (mean years ± SD) | | | | | | | |
| **Married** (%, n) | | | | | | | |
| **Primigravida** (%, n) | | | | | | | |
| **First abortion** (%, n) | | | | | | | |
| **Education** (mean years ± SD) | | | | | | | |
| **Gestational age** (mean weeks ± SD) | | | | | | | |
| **Maximum Gestation age** (e.g. < 9 weeks (< 56 days), 9 - 12 weeks (56 - 83 days), ≥ 12 weeks (84= days)) | | | | | | | |

**INTERVENTIONS**

| Characteristic | Self-admin (clinic, then home)"home users" | Provider-admin(clinic only)"clinic users" | Overall "all users" | Self-admin in home only | Self-admin in clinic + home |
|---|---|---|---|---|---|
| **Drugs** used (mife + miso; miso only; mife only) | | | | | |
| **Dosage** (mg or µg): first [second] | | | | | |
| **Time** in between dosages: first and second [second and third] (third and fourth) | | | | | |
| **Route** of administration (e.g. oral, buccal, sublingual, vaginal) first [second] (third) | | | | | |
| # of women who **self-selected** into each group (n,%) | | | | | |

**Reported if additional misoprostol given? If so, when, how much, for how long, etc?**

**Please report details of additional miso doses**

| Additional miso doses | Self-admin (clinic, then home) "home users" | Provider-admin (clinic only) "clinic users" | Overall "all users" |
|---|---|---|---|
| **Dosage** (mg or µg) : (third) fourth) | | | |
| **Time** in between dosages: (third and fourth) | | | |
| **Route** of administration (e.g. oral, buccal, sublingual, vaginal) (third) fourth | | | |

**OUTCOMES**

| **GROUPS: enrolled vs. analyzed** | | | |
|---|---|---|---|
| **# women per group enrolled** | Group label from study | n | % |
| **Self-admin** | home users of miso | | |
| **Provider-admin** (provider only) | clinic users of miso | | |
| **Overall** | all users | | |

*(Continued)*

| **Lost to follow-up** | Group label from study | n | % |
|---|---|---|---|
| **Self-admin** | home users of miso | | |
| **Provider-admin** (provider only) | clinic users of miso | | |
| **Overall** | all users | | |

| **# women per group analyzed** | Group label from study | n | % |
|---|---|---|---|
| **Self-admin** | home users of miso | | |
| **Provider-admin** (provider only) | clinic users of miso | | |
| **Overall** | all users | | |

| **OUTCOMES** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITT or per protocol analysis used? (include description) | | | | | | | | | | | | |
| When (days) and how was outcome determined? | | | | | | | | | | | | |
| **Outcome of MA** (n, %) | **N** | **Primary Outcome** | | | **Classification of failure** | | | | | | | |
| | | **Successful/Complete** | | | **Failure rate (overall)** | | | **Ongoing pregnancy** | | | **Incomplete** | |
| Definition of outcome (if reported) | | | | | | | | | | | | |
| Group | Group label from study | n | % | CI or P value | n | % | CI or P value | n | % | CI or P value | n | % | CI or P value |
| **Self-admin** | home users of miso | | | | | | | | | | | |
| **Provider-admin** (provider only) | clinic users of miso | | | | | | | | | | | |
| Self-admin in clinic only | clinic mife, clinic miso | | | | | | | | | | | |
| Self-admin in clinic + home | clinic mife, home miso | | | | | | | | | | | |
| Self-admin at home only | home mife, home miso | | | | | | | | | | | |
| **Overall** | all users | | | | | | | | | | | |
| **Complication: requiring surgical intervention (n, %)** | | | | | | | | | | | | |

*(Continued)*

| | | | Total requiring surgical intervention | | | Medically indicated | | | Provider decision | | | Woman's request | | | Provider's decision or Woman's request | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Definition of category (if reported) | | | | | | | | | | | | | | | | | |
| Group | Group label from study | N | n | % | CI or P value | n | % | CI or P value | n | % | CI or P value | n | % | CI or P value | n | % | CI or P value |
| **Self-admin** | home users of miso | | | | | | | | | | | | | | | | |
| **Provider-admin** (provider only) | clinic users of miso | | | | | | | | | | | | | | | | |
| Self-admin in clinic only | clinic mife, clinic miso | | | | | | | | | | | | | | | | |
| Self-admin in clinic + home | clinic mife, home miso | | | | | | | | | | | | | | | | |
| Self-admin at home only | home mife, home miso | | | | | | | | | | | | | | | | |
| **Overall** | all users | | | | | | | | | | | | | | | | |

| **Complications, (n, %)** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Hematoma** | | | **Hemorrhage** | | | **Infection** | | | **Requiring hospitalization** | | | **Advanced pregnancies (uterine rupture, hysterectomy, mortality)** | | | **Other (specify)** | | |

*(Continued)*

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Definition of category (if reported) | | | | | | | | | | | | | | | | |
| Group | Group label from study | N | n | % | n | % | n | % | n | % | n | % | n | % | n | % |
| **Self-admin** | home users of miso | | | | | | | | | | | | | | | |
| **Provider-admin** (provider only) | clinic users of miso | | | | | | | | | | | | | | | |
| Self-admin in clinic only | clinic mife, clinic miso | | | | | | | | | | | | | | | |
| Self-admin in clinic + home | clinic mife, home miso | | | | | | | | | | | | | | | |
| Self-admin at home only | home mife, home miso | | | | | | | | | | | | | | | |
| **Overall** | all users | | | | | | | | | | | | | | | |
| | | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | | |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Side effects, (mean days, SD -or- n, %)** | | | | | | | | | | | | | | | | |
| | | | **Nausea** | | **Heavy bleeding (> period)** | | **Vomiting** | | **Pain/cramps** | | **Fever/chills** | | **Diarrhea** | | **Other (specify)** | |
| Definition of category (if reported) | | | | | | | | | | | | | | | | |
| Group | Group label from study | N | n | % | n | % | n | % | n | % | n | % | n | % | n | % |

*(Continued)*

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Self-admin** | home users of miso | | | | | | | | | | | | |
| **Provider-admin** (provider only) | clinic users of miso | | | | | | | | | | | | |
| Self-admin in clinic only | clinic mife, clinic miso | | | | | | | | | | | | |
| Self-admin in clinic + home | clinic mife, home miso | | | | | | | | | | | | |
| Self-admin at home only | home mife, home miso | | | | | | | | | | | | |
| **Overall** | all users | | | | | | | | | | | | |
| | | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= |
| | | | | | | | | | | | | | |
| **Acceptability of MA, (n, %)** | | | | | | | | | | | | | |
| | | | **Satisfied or highly satisfied** | | **Would choose MA again** | | **Would select home use for future MA** | | **Would select clinic use for future MA** | | **Would recommend to a friend** | | **Other (specify)** |
| **Definition of category (if reported)** | | | **One or both?** | | | | | | | | | | |
| Group | Group label from study | N | n | % | n | % | n | % | n | % | n | % | n | % |
| **Self-admin** | home users of miso | | | | | | | | | | | | |
| **Provider-admin** (provider only) | clinic users of miso | | | | | | | | | | | | |

*(Continued)*

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Self-admin in clinic only | clinic mife, clinic miso | | | | | | | | | | | | | | | | | | | | | | |
| Self-admin in clinic + home | clinic mife, home miso | | | | | | | | | | | | | | | | | | | | | | |
| Self-admin at home only | home mife, home miso | | | | | | | | | | | | | | | | | | | | | | |
| **Overall** | all users | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | | | | | | |
| **Best features, (n, %)** | | | | | | | | | | | | | | | | | | | | | | | |
| | | | **Easy and quick** | | **Perceived less pain** | | **Perceived as safer, healthier** | | **Secret, more confidential** | | **Less anxiety, fear, worries** | | **Method is non invasive** | | **Stay at home, avoid clinic** | | **More natural, similar to menstruation** | | **None** | | **Other (specify)** | |
| **Definition of category (if reported)** | | | | | | | | | | | | | | | | | | | | | | | |
| **Group** | **Group label from study** | **N** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | |
| **Self-admin** | home users of miso | | | | | | | | | | | | | | | | | | | | | | |
| **Provider-admin** (provider only) | clinic users of miso | | | | | | | | | | | | | | | | | | | | | | |

*(Continued)*

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Self-admin in clinic only | clinic mife, clinic miso | | | | | | | | | | | | | | | | |
| Self-admin in clinic + home | clinic mife, home miso | | | | | | | | | | | | | | | | |
| Self-admin at home only | home mife, home miso | | | | | | | | | | | | | | | | |
| **Overall** | all users | | | | | | | | | | | | | | | | |
| | | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= |
| | | | | | | | | | | | | | | | | | |
| **Worst features, (n, %)** | | | | | | | | | | | | | | | | | |
| | | | **Fear, anxiety** | | **None, no reason given** | | **Bleeding** | | **Pain and cramps** | | **Fatigue** | | **Procedure takes too long/ too many visits** | | **Waiting for completion** | | **Other (specify)** |
| **Definition of category (if reported)** | | | | | | | | | | | | | | | | | |
| **Group** | **Group label from study** | **N** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** |

*(Continued)*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Self-admin** | home users of miso | | | | | | | | |
| **Provider-admin** (provider only) | clinic users of miso | | | | | | | | |
| Self-admin in clinic only | clinic mife, clinic miso | | | | | | | | |
| Self-admin in clinic + home | clinic mife, home miso | | | | | | | | |
| Self-admin at home only | home mife, home miso | | | | | | | | |
| **Overall** | all users | | | | | | | | |
| | | CI or P value= | CI or P value= | CI or P value= | CI or P value= | CI or P value= | CI or P value= | CI or P value= | CI or P value= |
| | | | | | | | | | |
| | | | | | | | | | |
| **Companionship during home administration of misoprostol, (n, %)** | | | | **Person who was present** | | | | | |
| | | **Any companion** | | **Husband** | **Other family** | **Mother** | **Friend** | **Other person** | |
| Definition of category (if reported) | | | | | | | | | |

*(Continued)*

| Group | Group label from study | N | n | % | n | % | n | % | n | % | n | % | n | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Self-admin | home users of miso | | | | | | | | | | | | | |
| Self-admin in clinic + home | clinic mife, home miso | | | | | | | | | | | | | |
| Self-admin at home only | home mife, home miso | | | | | | | | | | | | | |
| | | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | | CI or P value= | |

**Compliance/adherence to protocol, (n, %)**

| | | | **Perfect use** | | **Did not complete protocol** | | **Miso not taken on time** | | **Did not return to confirm abortion status** | |
|---|---|---|---|---|---|---|---|---|---|---|
| Definition of category (if reported) | | | | | | | | | | |
| Group | Group label from study | N | n | % | n | % | n | % | n | % |
| **Self-admin** | home users of miso | | | | | | | | | |
| **Provider-admin** (provider only) | clinic users of miso | | | | | | | | | |
| **Overall** | all users | | | | | | | | | |
| | | | CI or P value= | | CCI or P value= | | CI or P value= | | CI or P value= | |

| **Contact with health services, (n, %)** | | | | | | |
|---|---|---|---|---|---|---|
| | | | **Unscheduled clinic visits** | | **Called clinic/hotline** | |
| Definition of category (if reported) | | | | | | |
| Group | Group label from study | N | n | % | n | % |
| **Self-admin** | home users of miso | | | | | |
| **Provider-admin** (provider only) | clinic users of miso | | | | | |
| **Overall** | all users | | | | | |
| | | | CI or P value= | | CI or P value= | |

## CONTRIBUTIONS OF AUTHORS

Katherine Gambir: drafted the protocol with input from Kelly Necastro, Caron Kim, Bela Ganatra, and Thoai D Ngo; worked with an Information Specialist to develop and run the search strategy; obtained copies of the studies; selected which studies to include; extracted data from studies and entered data into Review Manager 5; conducted the analysis with input from co-authors; interpreted the analysis and drafted the final review with support from Kelly NeCastro; and will update the review.

Kelly Necastro: obtained copies of the studies; selected which studies to include; extracted data from studies and entered data into Review Manager 5; provided support to interpret and draft the analysis; and will update the review.

Caron Kim: provided input for this analysis and the final draft of the review; and will update the review.

Bela Ganatra: provided input for this analysis and the final draft of the review; and will update the review.

Thoai D Ngo: provided input for this analysis and the final draft of the review; and will update the review.

## DECLARATIONS OF INTEREST

Katherine Gambir does not have any interests to declare.

Kelly Ann Necastro does not have any interests to declare.

Caron Kim does not have any interests to declare.

Bela Ganatra does not have any interests to declare.

Thoai D Ngo does not have any interests to declare.

## SOURCES OF SUPPORT

### Internal sources

- No support., Other.

### External sources

- No support., Other.

## DIFFERENCES BETWEEN PROTOCOL AND REVIEW

We restructured the Background section of the review to add clarity and to update data and references.

We reported our treatment effect measure as risk ratios instead of odds ratios, to improve the precision and clarity of our results.

We reported risk differences instead of risk ratios for the acceptability outcome, to improve precision and clarity of our results.

To assess the quality of the evidence in this review we selected three critical outcomes:

- Successful abortion
- Ongoing pregnancy
- Any complication requiring surgical intervention

Instead of analyzing only the available data, we included data published in a previous systematic review (Ngo 2011), and for missing data not published in Ngo 2011 we attempted to calculate the missing data using simple mathematical calculations, such as converting percentages to count data (details are described in Table 1).

We identified typos and/or incorrect calculations in the protocol (Gambir 2018). To avoid perpetuating incorrect data, we noted these errors and reported the corrected data in this review.

We extracted additional data on the following subsidiary outcomes, which were not indicated in our protocol:

- Contact with health services
- Compliance with medical abortion protocol
- Best and worst features of the medical abortion method

We did not conduct a sensitivity analysis to assess the effect of the risks of bias of the studies included in the main effects analysis, because we rated all 16 NRSs as being at serious risk according to the ROBINS-I tool, and both RCTs as being at unclear risk using the Cochrane 'Risk of bias' tool for RCTs.

We did not conduct a separate analysis of high-quality studies to explore the effect of biases on study heterogeneity as planned, because we rated the quality of evidence by outcome in the 'Summary of findings' table.

We had intended for the 'Summary of findings' table to evaluate the overall certainty of the body of evidence for all the main review outcomes, but given the limited number of outcomes permitted in the table, we included only the primary outcome (successful abortion (uterine evacuation without the need for surgical intervention)) and two key secondary outcomes (ongoing pregnancy and any complication requiring surgical intervention).

Initially we only included studies if they reported on our primary outcome (successful abortion), but after we had begun screening the Cochrane Fertility Regulation Group required us to change these criteria in accordance with the Cochrane handbook chapter 4.6.3, so we began to include studies even if they did not report on our primary outcome (Lefebvre 2019).

Although there was no plan to present 'Acceptability of medical abortions' using the risk difference (RD), we used this metric because it is more appropriate, given that we were measuring the differences within groups rather than between groups.

In the protocol, we had specified that we would perform a meta-analysis of effectiveness, but we also performed meta-analyses on other important outcomes in this review. Those outcomes include ongoing pregnancy, incomplete medical abortion, infection, and requiring hospitalization.

## INDEX TERMS

### Medical Subject Headings (MeSH)

*Patient Safety; Abortifacient Agents [*administration & dosage]; Abortion, Induced [*methods]; Mifepristone [administration & dosage]; Misoprostol [administration & dosage]; Pregnancy Trimester, First; Randomized Controlled Trials as Topic

### MeSH check words

Female; Humans; Pregnancy